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Oil Pumps Quick Reference

Technical Specifications and Selection Chart

	Annual Usage	Line Length [‡]	Dispense Points	Fluids	Air Inlet	Fluid Inlet	Fluid Outlet
	Fast-Ball, 1:1						
	5,000 gal (19,000 l)	< 100 ft (30 m)	1 (no reels)	Motor Oil, ATF, Hydraulic Fluid	1/4 in npt(f)	1-1/2 in npt(f)	3/4 in npt(f)
	LD Series, 3:1						
	20,000 gal (75,000 l)	300 ft (91 m)	1 to 2	Motor Oil, Gear Oil, ATF, Hydraulic Fluid	1/4 in npt(f)	1 in npt(f)	1/2 in npt(f)
	LD Series, 5:1						
	20,000 gal (75,000 l)	300 ft (91 m)	1 to 2	Motor Oil, Gear Oil, ATF, Hydraulic Fluid	1/4 in npt(f)	1 in npt(f)	1/2 in npt(f)
	Mini Fire-Ball 225, 3:1						
	30,000 gal (113,500 l)	250 ft (76 m)	1 to 2	Motor Oil, Gear Oil, ATF, Hydraulic Fluid	3/8 in npt(f)	1-1/2 in npt(f)	1/2 in npt(f)
	Fire-Ball 300, 5:1						
	35,000 gal (132,000 l)	500 ft (152 m)	1 to 3	Motor Oil, Gear Oil, ATF, Hydraulic Fluid	3/8 in npt(f)	1-1/2 in npt(f)	1/2 in npt(f)
	Fire-Ball 425, 3:1						
	>35,000 gal (132,000 l)	Up to 250 ft (76 m)	3 to 4	Motor Oil, Gear Oil, ATF, Hydraulic Fluid	1/4 in npt(f)	1-1/2 in npt(f)	3/4 in npt(f)
	Fire-Ball 425, 6:1						
	>35,000 gal (132,000 l)	Up to 500 ft (152 m)	3 to 4	Motor Oil, Gear Oil, ATF, Hydraulic Fluid	1/4 in npt(f)	1-1/2 in npt(f)	3/4 in npt(f)
	Fire-Ball 425, 10:1						
	>35,000 gal (132,000 l)	Up to 750 ft (228.6 m)	3 to 4	Motor Oil, Gear Oil, ATF, Hydraulic Fluid	1/4 in npt(f)	1-1/2 in npt(f)	3/4 in npt(f)

[‡] Consult your local authorized Graco representative for line or pipe sizing

Oil Pumps Quick Reference

Technical Specifications and Selection Chart



Annual Usage	Line Length [‡]	Dispense Points	Pump Ratio(s)	Output Per Cycle	Fluids
Dura-Flo, 6:1					
>35,000 gal (132,000 l)	Up to 500 ft (152 m)	2 to 4	6:1	1000 cc	Motor Oil, Gear Oil, ATF, Hydraulic Fluid
Dura-Flo, 10:1					
>35,000 gal (132,000 l)	Up to 750 ft (228.6 m)	2 to 4	10:1	1000 cc	Motor Oil, Gear Oil, ATF, Hydraulic Fluid
Dura-Flo, 12:1 Carbon Steel or Dura-Flo, 12:1 Stainless Steel					
>35,000 gal (132,000 l)	Up to 1000 ft (305 m)	2 to 4	12:1	580 cc	Motor Oil, Gear Oil, ATF, Hydraulic Fluid
Dura-Flo, 23:1					
>35,000 gal (132,000 l)	Up to 1000 ft (305 m)	2 to 4	23:1	580 cc	Motor Oil, Gear Oil, ATF, Hydraulic Fluid



Annual Usage	Line Length	Dispense Points	Pump Ratio(s)	Output Per Cycle	Fluids
High-Flo, 3.5:1					
>35,000 gal (132,000 l)	Up to 250 ft (76 m)	4 to 5	3.5:1	2000 cc	Motor Oil, Gear Oil, ATF, Hydraulic Fluid
High-Flo, 4.5:1					
>35,000 gal (132,000 l)	Up to 450 ft (137.1 m)	4 to 5	4.5:1	1500 cc	Motor Oil, Gear Oil, ATF, Hydraulic Fluid
High-Flo, 6:1					
>35,000 gal (132,000 l)	Up to 500 ft (152.5 m)	4 to 5	6:1	2000 cc	Motor Oil, Gear Oil, ATF, Hydraulic Fluid

[‡] Consult your local authorized Graco representative for line or pipe sizing

Fast-Ball® 1:1

Air-Powered Oil Pumps and Packages

Features and Benefits

- In-line design with fewer parts for less pump wear
- Differential air motor ensures smooth pumping
- Double-acting pump provides reliable fluid flow

Typical Applications

- Lubricant transfer
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils

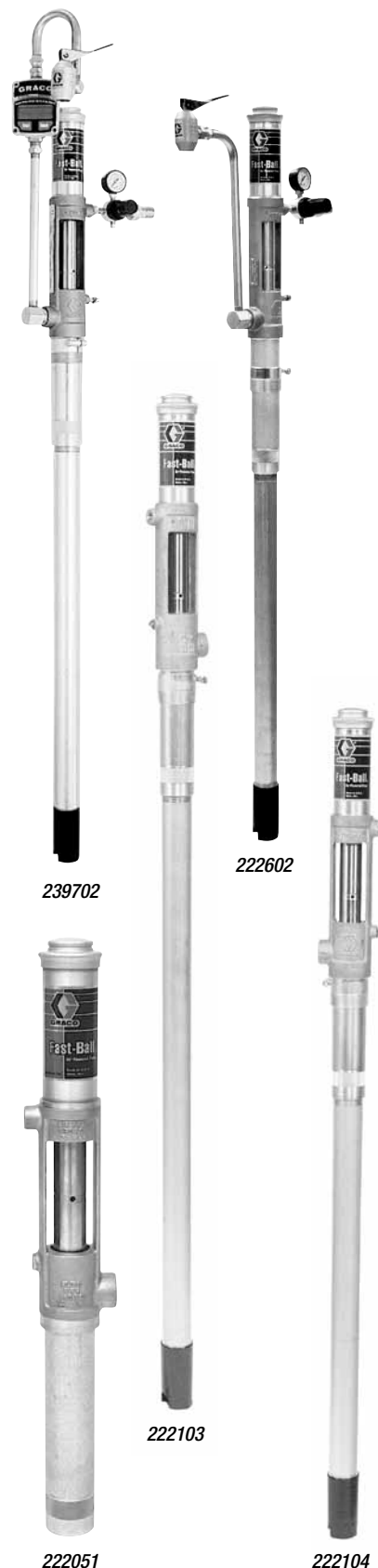
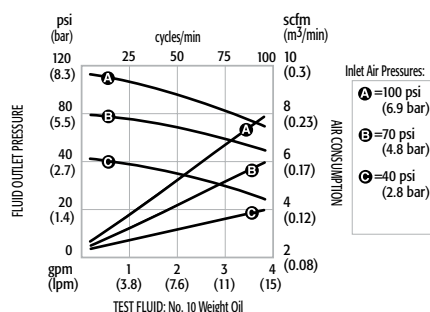
Technical Specifications

Cycles per Gallon.....	10 (45.5 liters)
Fluid Flow gal/min @ 80 cpm	5 (19 liters)
Maximum Fluid Pressure	180 psi (12.5 bar)
Air Motor Effective Diameter.....	1.4 in (35.6 mm)
Air Operating Range	40-180 psi (2.7-12.5 bar)
Approx. Air Use and Flow @ 100 psi and 80 cpm	5 scfm
Wetted Materials	CS, Polyurethane
Air Inlet Port Size	1/4 in npt(f)
Fluid Inlet Port Size	1-1/2 in npt(f)
Fluid Outlet Port Size.....	3/4 in npt(f)
Line Length‡	Up to 100 ft (30.5 m)
Dispense Points	1 (not recommended with hose reel)
Annual Usage	Up to 5,000 gal (19,000 l)
Typical Applications.....	Continuous duty, maintenance facility dispensing motor oil, automatic transmission fluid, hydraulic fluid

Ordering Information

Package	Non-Metered Dispense	U.S./Metric Metered Dispense	Bung-Mounted	Bung-Mounted	Universal
Container Size	55 gal (200 l)			275 gal (1040 l)	Universal
Package No.	222602	239702	222103	222104	222051
Pump	222103			222104	222051
Dispense Kit	218115	239703	—	—	—
Regulator Assembly	218316		—	—	—
Hose	109125	—	—	—	—
Hose Length	6 ft (1.8 m)	—	—	—	—
Bung Adapter	222308				—
Instruction Manual	307637		307906		

Pump Performance



‡ Consult your local authorized Graco representative for line or pipe sizing

LD Series 3:1 Pump

Air-Powered Oil Pumps and Packages

Features and Benefits

- Built-in thermal relief protects your equipment from thermal expansion
- Three inch air motor provides more power to create better flow
- Cup and plate design eliminates the need for O-rings that wear out faster

Typical Applications

- Lubricant transfer
- Automotive dealerships
- Fast lube centers
- Service shops
- Lube trucks

Typical Fluids Handled

- Petroleum- and synthetic-based oils

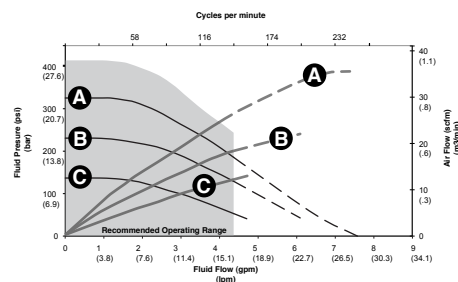
Technical Specifications

Maximum Fluid Working Pressure	450 psi (31 bar, 3.10MPa)
Fluid Pressure Ratio	3:1
Suction Lift (feet of oil)	10
Air Operation Range	20 to 150 psi (1.37 to 10.3 bar)
Recommended Air Pressure (for optimum life)	<125 psi (8.6 bar, 0.86 MPa)
Max Recommended Pump Speed	120 cycles per minute
Cycles Per Gallon/pound (l/kg)	29 cycles per gallon (7 cycles per liter)
Recommended Pump Speed (for maximum life)	75 cycles per minute or lower
Wetted Parts	Zinc plated carbon, steel, aluminum, nitrile, polyurethane, nickel plated aluminum
Sound Pressure Level	72.9 dB(a)
Sound Power Level	82 dB(a)
Approximate Weight	7 pounds (3.2 kg)
Air Inlet	1/4 in
Fluid Inlet	1 in
Fluid Outlet	1/2 in
Free Flow	7.8gpm
Annual Usage	Up to 20,000 gal (76,000 l)

Ordering Information

LD Series 3:1 Pumps	
24G576	3:1 Universal Oil Pump with Bung Adapter (24F918)
24G579	3:1 Oil Pump with Cut to length Down Tube, and Bung Adapter (24F918)
24G582	3:1 Oil Pump with 55 gallon (200 liter) Down Tube and Bung Adapter (24F918)
24G585	3:1 Oil Pump with 275 gal (1040 liter) Down Tube and Bung Adapter (24F918)

Pump Performance



LD Series 3:1 Pump

LD Series 5:1 Pump

Air-Powered Oil Pumps and Packages

Features and Benefits

- Built-in thermal relief protects your equipment from thermal expansion
- Three inch air motor provides more power to create better flow
- Cup and plate design eliminates the need for O-rings that wear out faster

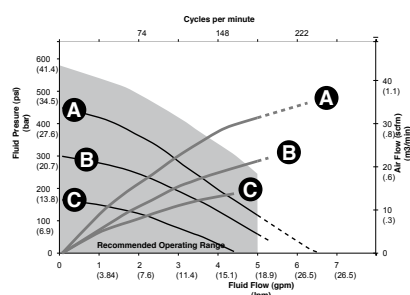
Typical Applications

- Lubricant transfer
- Automotive dealerships
- Fast lube centers
- Service shops
- Lube trucks

Typical Fluids Handled

- Petroleum- and synthetic-based oils

Pump Performance



LD Series 5:1 Pump

Technical Specifications

Maximum Fluid Working Pressure	750 psi (51.7 bar, 5.17MPa)
Fluid Pressure Ratio	5:1
Suction Lift (feet of oil)	10
Air Operation Range	20 to 150 psi (1.37 to 10.3 bar)
Recommended Air Pressure (for optimum life)	<125 psi (8.6 bar, 0.86 MPa)
Max Recommended Pump Speed	180 cycles per minute
Cycles Per Gallon/pound (l/kg)	37 cycles per gallon (10 cycles per liter)
Recommended Pump Speed (for maximum life)	75 cycles per minute or lower
Wetted Parts	Zinc plated carbon, steel, aluminum, nitrile, polyurethane, nickel plated aluminum
Sound Pressure Level	72.9 dB(a)
Sound Power Level	82 dB(a)
Approximate Weight	7.7 pounds (3.5 kg)
Air Inlet	1/4 in
Fluid Inlet	1 in
Fluid Outlet	1/2 in
Free Flow	6.7gpm
Annual Usage	Up to 20,000 gal (76,000 l)

Ordering Information

LD Series 5:1 Pumps	
24G588	5:1 Universal Oil Pump with Bung Adapter (24F918)
24G591	5:1 Oil Pump with Cut to Length Down Tube and Bung Adapter (24F918)
24G594	5:1 Oil Pump with 55gal (200 liter) Down Tube and Bung Adapter (24F918)
24G597	5:1 Oil Pump with 275 gal (1040 liter) Down Tube and Bung Adapter (24F918)

LD Series Pump Packages

Air-Powered Oil Pumps and Packages

Ordering Information

3:1 Wall Mount Packages	
24H689	3:1 Oil Wall Mount Package - Drum. Includes: 3:1 Universal oil pump (24G576), 6 ft LD oil pump suction hose kit for 55 gal drum (24F935), Wall mount bracket (24F910)
24H695	3:1 Oil Wall Mount Package - Tote. Includes: 3:1 Universal oil pump (24G576), 6 ft LD oil pump section hose kit for 275 gal tote (24H666), Oil hose kit (24H859), Wall mount bracket (24F910)
3:1 Tote Mount Packages	
24H702	3:1 Oil Tote Mount Package - Top. Includes: 3:1 275 gal (1040L) Oil pump (24G585), 6 ft Oil hose kit (24J495), Top mount tote bracket (24F930), LD Reel bracket kit (24F932), Meter tray (24F914), LDM5 Rigid Meter (256215), 1/2" x 35' LD oil hose reel (24H662)
24H704	3:1 Oil Tote Mount Package - Top. Includes: 3:1 275 gal (1040L) Oil pump (24G585), 6 ft Oil hose kit (24J495), Top mount tote bracket (24F930), LD Reel bracket kit (24F932), Meter tray (24F914), LDP5 Rigid Meter (256216), 1/2" x 35' LD oil hose reel (24H662)
24H726	3:1 Oil Tote Mount Package - Drain. Includes: 3:1 Universal oil pump (24G576), 6ft Oil hose kit (24J495), 6 ft Suction hose kit (24H669), Tote mount pump bracket (24F920), Top mount tote bracket (24F931), LD Reel bracket kit (24F932), Meter tray (24F914), LDM5 Rigid meter (256215), LD oil hose reel, 1/2" x 35' (24H662)
24H728	3:1 Oil Tote Mount Package - Drain. Includes: 3:1 Universal oil pump (24G576), 6ft Oil hose kit (24J495), 6ft Suction hose kit (24H669), Tote mount pump bracket (24F920), Top mount tote bracket (24F931), LD Reel bracket kit (24F932), Meter tray (24F914), LDP5 Rigid meter (256216), LD oil hose reel, 1/2" x 35' (24H662)
3:1 Mobile Packages	
24H751	3:1 Oil Mobile Package with LD Reel. Includes: 3:1 200L Oil pump (24G582), 6ft Oil hose kit (24J495), LDM5 Rigid meter (256215), 55 gal Cart (24F915), LD oil hose reel, 1/2" x 35' (24H662)
24H753	3:1 Oil Mobile Package with LD Reel. Includes: 3:1 200L Oil pump (24G582), 6ft Oil hose kit (24J495), LDP5 Rigid meter (256216), 55 gal Cart (24F915), LD oil hose reel, 1/2" x 35' (24H662)
24H775	3:1 Oil Mobile Package. Includes: 3:1 200 L Oil pump (24G582), Fluid hose kit, 5 M (24H865), LDM5 Rigid meter (256215), 55 gal Cart (24F915)
24H777	3:1 Oil Mobile Package. Includes: 3:1 200 L Oil pump (24G582), Fluid hose kit, 5 M (24H865), LDP5 Rigid meter (256216), 55 gal Cart (24F915)
3:1 Stationary Packages	
24H800	3:1 Oil Stationary Package. Includes: 3:1 Multilength oil pump (24G579), 6ft Oil hose kit (24H859), LDM5 Rigid meter (256215)
24H802	3:1 Oil Stationary Package. Includes: 3:1 Multi-length oil pump (24G579), 6 ft Oil hose kit (24H859), LDP5 Rigid meter (256216)
5:1 Wall Mount Packages	
24H836	5:1 Oil Wall Mount Package - Drum. Includes: 5:1 Oil universal pump (24G588), 6 ft LD oil pump suction hose kit for 55gal drum(24F935), Wall mount bracket (24F910)
24H842	5:1 Oil Wall Mount Package - Tote. Includes: 5:1 Oil universal pump (24G588), 6ft Oil hose kit (24H859), 6ft LD Oil pump section hose kit for 275gal tote (24H666), Wall mount bracket (24F910)
5:1 Tote Mount Packages	
24H868	5:1 Oil Tote Mount Package - Top. Includes: 5:1 1040L Oil pump (24G597), 6 ft Oil hose kit (24J495), Tote top mount bracket (24F930), LD Reel bracket (24F932), Meter tray (24F914), LDM5 rigid meter (256215), 1/2" x 35' LD oil hose reel (24H662)
24H870	5:1 Oil Tote Mount Package - Top. Includes: 5:1 1040L Oil pump (24G597), 6 ft Oil hose kit (24J495), Tote top mount bracket (24F930), LD Reel bracket (24F932), Meter tray (24F914), LDP5 Rigid meter (256216), 1/2" x 35' LD oil hose reel (24H662)

24H892	5:1 Oil Tote Mount Package - Drain. Includes: 5:1 Oil universal pump (24G588), 6 ft Oil hose kit (24J495), Suction hose kit tote (24H669), Tote mount pump bracket (24F920), Tote top mount bracket (24F931), LD reel bracket kit (24F932), Meter tray (24F914), LDM5 Rigid meter (256215), LD oil hose reel, 1/2" x 35' (24H662)
24H894	5:1 Oil Tote Mount Package - Drain. Includes: 5:1 Oil universal pump (24G588), 6 ft Oil hose kit (24J495), Suction hose kit tote (24H669), Tote mount pump bracket (24F920), Tote top mount bracket (24F931), LD reel bracket kit (24F932), Meter tray (23F914), LDP5 Rigid meter (256216), LD oil hose reel, 1/2" x 35' (24H662)
5:1 Mobile Packages	
24H916	5:1 Oil Mobile Package with LD Reel. Includes: 5:1 55 gal (200 L) Oil pump (24G594), 6 ft Oil hose kit (24J495), LDM5 Rigid meter (256215), 55 gal Cart (24F915), LD oil hose reel, 1/2" x 35' (24H662)
24H918	5:1 Oil Mobile Package with LD Reel. Includes: 5:1 55 gal (200 L) Oil pump (24G594), 6ft Oil hose kit (24J495), LDP5 Rigid meter (256216), 55 gal Cart (24F915), LD oil hose reel, 1/2" x 35' (24H662)
24H941	5:1 Oil Mobile Package. Includes: 5:1 55 gal (200 L) oil pump (24G594), Fluid hose kit, 5M (24H865), LDM5 Rigid meter (256215), 55 gal Cart (24F915)
24H943	5:1 Oil Mobile Package. Includes: 5:1 55gal (200L) oil pump (24G594), Fluid hose kit, 5M (24H865), LDP5 Rigid meter (256216), 55 gal Cart (24F915)
5:1 Stationary Packages	
24H965	5:1 Oil Stationary Package. Includes: 5:1 Oil multi-length pump (24G591), Fluid oil hose kit (24H859), LDM5 Rigid meter (256215)
24H967	5:1 Oil Stationary Package. Includes: 5:1 Oil multi-length pump (24G591), Fluid oil hose kit (24H859), LDP5 Rigid meter (256216)



LD Series Pump Tank Packages

Air-Powered Oil Pumps and Packages

Ordering Information

3:1 Tank Packages with LD Reel	
24J776	3:1 LD Tank Package. Includes: 3:1 Universal oil pump (24G576), LDM5 Manual meter (256215), 1/2" x 35' LD oil hose reel (24H662), 1/2" Oil inlet kit (24C538), LD swivel mount bracket (24C772)
3:1 Tank Packages with SD Reel	
24J733	3:1 Tank Package - Manual. Includes: 3:1 Universal Oil pump (24G576), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2" x 50' (HPM65B), SD Reel Inlet Kit (218549)
24J734	3:1 Tank Package - Preset. Includes: 3:1 Universal Oil pump (24G576), LDP5 Preset meter with rigid extension (256216), SD oil reel, 1/2" x 50' (HPM65B), SD Reel Inlet kit (218549)
24K836	3:1 Tank Package - Manual Flex: 3:1 Universal Oil pump (24G576), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2" x 50' (HPM65B), SD Reel Inlet Kit (218549)
3:1 Deluxe Tank Packages with SD Reel	
24K777	3:1 Deluxe Tank Package - Preset Rigid: 3:1 Universal Oil Pump (24G576), LDP5 Preset meter with rigid extension (256216), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K797	3:1 Deluxe Tank Package - Manual Rigid: 3:1 Universal Oil Pump (24G576), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K799	3:1 Deluxe Tank Package - Manual Flex: 3:1 Universal Oil Pump (24G576), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K832	3:1 Deluxe Tank Package - Manual Rigid: 3:1 Universal Oil Pump (24G576), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2" x 35' (HPM33B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K834	3:1 Deluxe Tank Package - Manual Rigid: 3:1 Universal Oil Pump (24G576), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2" x 35' (HPM33B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
3:1 Tote Mount Packages	
24K838	3:1 Oil Tote Mount with SD Reel -Preset Rigid. Includes: 3:1 Oil pump with 275 gal (1040 liter) steel down tube (24G585), LDP5 Preset meter with rigid extension (256216), SD oil reel, 1/2"x50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), Pump tote mount bracket (24F930), SD reel bracket for tote mount, Meter tray (24F914)
24K840	3:1 Oil Tote Mount with SD Reel -Manual Rigid. Includes: 3:1 Oil pump with 275 gal (1040 liter) steel down tube (24G585), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2"x50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), Pump tote mount bracket (24F930), SD reel bracket for tote mount, Meter tray (24F914)
24K842	3:1 Oil Tote Mount with SD Reel -Manual Flex. Includes: 3:1 Oil pump with 275 gal (1040 liter) steel down tube (24G585), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), Pump tote mount bracket (24F930), SD reel bracket for tote mount, Meter tray (24F914)

5:1 Tank Packages with LD Reel	
24J777	5:1 LD Tank Package. Includes: 5:1 Universal oil pump (24G588), LDM5 Manual meter (256215), 1/2" x 35' LD oil hose reel (24H662), 1/2" Oil inlet kit (24C538), LD swivel mount bracket (24C772)
5:1 Tank Packages with SD Reel	
24J735	5:1 Tank Package - Manual. Includes: 5:1 Multi-length oil pump (24G588), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2" x 50' (HPM65B), SD Reel Inlet kit (218549)
24J736	5:1 Tank Package - Preset. Includes: 5:1 Multi-length oil pump (24G588), LDP5 Preset meter with rigid extension (256216), SD reel, 1/2" x 50' (HPM65B), SD Reel Inlet Kit (218549)
24K837	5:1 Tank Package - Manual Flex: 5:1 Universal Oil pump (24G588), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2" x 50' (HPM65B), SD Reel Inlet Kit (218549)
5:1 Deluxe Tank Packages with SD Reel	
24K796	5:1 Deluxe Tank Package - Preset Rigid: 5:1 Universal Oil Pump (24G588), LDP5 Preset meter with rigid extension (256216), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K798	5:1 Deluxe Tank Package - Manual Rigid: 5:1 Universal Oil Pump (24G588), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K800	5:1 Deluxe Tank Package - Manual Flex: 5:1 Universal Oil Pump (24G588), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K833	5:1 Deluxe Tank Package - Manual Rigid: 5:1 Universal Oil Pump (24G588), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2" x 35' (HPM33B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
24K835	5:1 Deluxe Tank Package - Manual Rigid: 5:1 Universal Oil Pump (24G588), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2" x 35' (HPM33B), 6 ft Air & Fluid hoses with fittings (24J495), 1/4" x 3/8" Mini air regulator with valve (24H420)
5:1 Tote Mount Packages	
24K839	5:1 Oil Tote Mount with SD Reel -Preset Rigid. Includes: 5:1 Oil pump with 275 gal (1040 liter) steel down tube (24G597), LDP5 Preset meter with rigid extension (256216), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), Pump tote mount bracket (24F930), SD reel bracket for tote mount, Meter tray (24F914)
24K841	5:1 Oil Tote Mount with SD Reel -Preset Rigid. Includes: 5:1 Oil pump with 275 gal (1040 liter) steel down tube (24G597), LDM5 Manual meter with rigid extension (256215), SD oil reel, 1/2" x 50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), Pump tote mount bracket (24F930), SD reel bracket for tote mount, Meter tray (24F914)
24K843	5:1 Oil Tote Mount with SD Reel -Preset Rigid. Includes: 5:1 Oil pump with 275 gal (1040 liter) steel down tube (24G597), LDM5 Manual meter with flex extension (258693), SD oil reel, 1/2"x50' (HPM65B), 6 ft Air & Fluid hoses with fittings (24J495), Pump tote mount bracket (24F930), SD reel bracket for tote mount, Meter tray (24F914)

LD Series Pump Accessories

Air-Powered Oil Pumps and Packages

Ordering Information

Drum Covers	
24F904	Cover for 35 lb (16 kg) pails
24F905	Cover for open-head 120 lb drums
24F906	Cover for open-head 400 lb drums
Follower Plates	
24F901	For 35lb (16 kg) pails with LD 50:1 pumps
24F902	For 120 lbs drum with LD 50:1 pumps
24F903	For 400 lb drums with LD 50:1 pumps
Suction Kits	
24F935	LD Oil Pump Suction hose kit for 55 gal (200 L) drum. Includes: 55 gal (200 L) drum length metal down tube, bung adapter, foot valve, and 6 ft of 1" suction hose
24H666	LD Oil Pump Suction hose kit for 275 gal (1040 L) drum. Includes: 275 gal (1040 L) tote length metal down tube, bung adapter, foot valve, and 6 ft of 1" suction hose
24H669	LD Oil Pump Suction hose kit and adapter for mounting pump to the side of IBC tote and dispensing from drain. Includes 1" x 3' Suction hose, 1" Elbow fitting, and union fitting (160022)
Hose & Fitting Kits	
24H865	15 ft LD pump fluid hose kit. Includes 1/2" x 15 ft fluid hose, 3/8" x 6 ft Air hose, Swivel (157705), and union fitting (156684)
24H859	6ft LD pump fluid hose kit. Includes 1/2" x 6ft fluid hose, 3/8" x 6 ft Air hose, Swivel (157705), and union fitting (156684)
24H862	6 ft LD pump grease hose kit. Includes 1/4" x 6' grease hose, 3/8" x 6 ft air hose, and fittings
Air Regulators	
24H420	Mini air pressure regulator with valve, 1/4 inch NPT x 3/8 inch NPT
Tote Mount Accessories	
24F914	Meter drip tray for mounting to the side of IBC tote
24F932	LD Reel bracket for mounting reel to IBC top mount tote bracket (24F930 & 24F920)
24F920	Tote mounting bracket to mount reel on top of IBC tote, (pump mounting bracket is not included)
24F930	Top of tote mounting bracket. For mounting LD pump in top of IBC tote
24F931	Bracket for mounting LD pump on the side of IBC tote
Mounting Hardware	
24F910	LD pump wall mounting bracket. For use with LD 3:1 & 5:1 pumps
24F918	Bung adapter for LD 3:1 & 5:1 pumps
Carts	
24F915	Drum cart with pneumatic wheels for 400 lb drums, includes chain for securing drum to cart
24H422	Drum cart with pneumatic wheels for 120 lb drums, includes chain for securing drum to cart



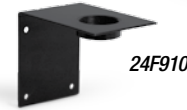
24F904



24F901



24F931



24F910



24F914



24F930



24F932



24F915

Mini Fire-Ball® 225 3:1

Air-Powered Oil Pumps and Packages

Features and Benefits

- In-line design with fewer parts for less pump wear
- Differential air motor ensures smooth pumping
- Double-acting pump provides reliable fluid flow

Typical Applications

- Lubricant transfer
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils

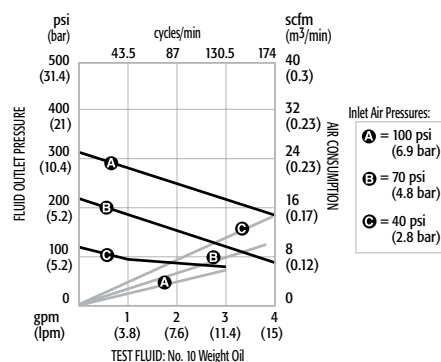
Technical Specifications

Cycles per Gallon.....	43.5 (11.4 liters)
Fluid Flow gal/min @ 80 cpm	1.84 (7.0 liters)
Maximum Fluid Pressure	540 psi (37 bar)
Air Motor Effective Diameter.....	2.25 in (57.2 mm)
Air Operating Range	40-180 psi (2.8-12 bar)
Approx. Air Use and Flow @ 100 psi and 80 cpm	8.5 scfm @ 2.1 gpm, (0.241 m ³ /min @ 7.9 lpm)
Wetted Materials	Steel, Buna-N, Polyurethane, Aluminum, Rulon®
Air Inlet Port Size	3/8 in npt(f)
Fluid Inlet Port Size	1-1/2 in npt(f)
Fluid Outlet Port Size.....	1/2 in npt(f)
Line Length‡	Up to 250 ft (76.2 m)
Dispense Points	1 to 2
Annual Usage	Up to 35,500 gal (132,000 l)
Typical Applications.....	Continuous duty, maintenance facility dispensing motor oil, gear oil, automatic transmission fluid, hydraulic fluid

Ordering Information

Mini Fire-Ball 225 3:1 Pump	
248097	3:1 Universal Oil Pump with suction tube (15C502) and bung adapter (222308)
246775	3:1 Universal Oil Pump

Pump Performance



246775

‡ Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® 300 5:1

Air-Powered Oil Pumps and Packages

Features and Benefits

- In-line design with fewer parts for less pump wear
- Differential air motor ensures smooth pumping
- Double-acting pump provides reliable fluid flow

Typical Applications

- Lubricant transfer
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils

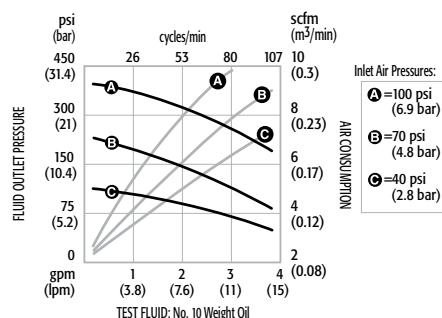
Technical Specifications

Cycles per Gallon.....	28.4 (8.6 liters)
Fluid Flow gal/min @ 80 cpm	2.8 (9.3 liters)
Maximum Fluid Pressure	900 psi (62 bar)
Air Motor Effective Diameter.....	3 in (76.2 mm)
Air Operating Range	40-180 psi (2.8-12 bar)
Approx. Air Use and Flow @ 100 psi and 80 cpm	27 scfm @ 3 gpm (0.765 m³/min @ 11.5 lpm)
Wetted Materials	Steel, Polyurethane, Aluminum, Buna-N
Air Inlet Port Size	3/8 npt(f)
Fluid Inlet Port Size	1-1/2 npt(f)
Fluid Outlet Port Size.....	1/2 npt(f)
Line Length‡	Up to 500 ft (152.5 m)
Dispense Points	1 to 3
Annual Usage	Up to 35,500 gal (132,000 l)
Typical Applications	Continuous duty, maintenance facility dispensing motor oil, gear oil, automatic transmission fluid, hydraulic fluid

Ordering Information

Fire-Ball 300 5:1 Pump	
203876	5:1 Universal Oil Pump
203872	5:1 Oil Pump, 16 gal (120 lb) drum size, for cover mount
203857	5:1 Oil Pump, 55 gal (400 lb) drum size, for cover mount
204254	5:1 Oil Pump, 55 gal (400 lb) drum size, bung mount
222087	5:1 Oil Pump, 275 gal (1040 lb) tank size, bung mount

Pump Performance



203876

Fire-Ball® 425 3:1

Air-Powered Oil Pumps and Packages

Features and Benefits

- In-line design with fewer parts for less pump wear
- Differential air motor ensures smooth pumping
- Double-acting pump provides reliable fluid flow

Typical Applications

- Lubricant transfer
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils

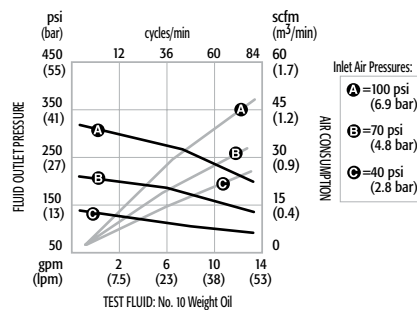
Technical Specifications

Cycles per Gallon.....	6 (1.6 liters)
Fluid Flow gal/min @ 80 cpm	13.4 (50.6 liters)
Maximum Fluid Pressure	540 psi (37 bar)
Air Motor Effective Diameter.....	4.25 in (107.9 mm)
Air Operating Range	40-180 psi (2.8-12 bar)
Approx. Air Use and Flow @ 100 psi and 80 cpm	58 scfm @ 13.4 gpm (1.64 m³/min @ 50.6 lpm)
Wetted Materials	Steel, Polyurethane, Aluminum, Nitrile
Air Inlet Port Size	1/2 in npt(f)
Fluid Inlet Port Size	1-1/2 in npt(f)
Fluid Outlet Port Size.....	3/4 in npt(f)
Line Length‡	Up to 250 ft (76.2 m)
Dispense Points	3 to 4
Annual Usage	Over 35,500 gal (132,000 l)
Typical Applications.....	High flow, low pressure maintenance facility dispensing motor oil, gear oil, automatic transmission fluid, hydraulic fluid

Ordering Information

Fire-Ball 425 3:1 Pump	
237526	3:1 Universal Oil Pump

Pump Performance



237526

‡ Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® 425 6:1

Air-Powered Oil Pumps and Packages

Features and Benefits

- In-line design with fewer parts for less pump wear
- Differential air motor ensures smooth pumping
- Double-acting pump provides reliable fluid flow

Typical Applications

- Lubricant transfer
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils

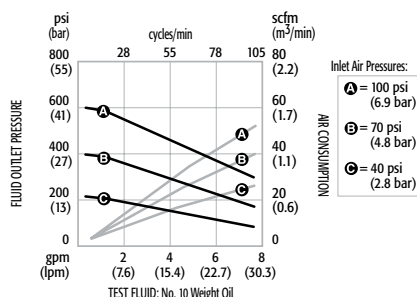
Technical Specifications

Cycles per Gallon.....	12 (3.2 liters)
Fluid Flow gal/min @ 80 cpm	6.6 (25.3 liters)
Maximum Fluid Pressure	1100 psi (76 bar)
Air Motor Effective Diameter.....	4.25 in (107.9 mm)
Air Operating Range	40-180 psi 2.8-12 bar)
Approx. Air Use and Flow @ 100 psi and 80 cpm	49.5 scfm @ 6.8 gpm (.334 m ³ /min @ 25.7 lpm)
Wetted Materials	Steel, Polyurethane, Aluminum, Nitrile
Air Inlet Port Size	1/2 in npt(f)
Fluid Inlet Port Size	1-1/2 in npt(f)
Fluid Outlet Port Size.....	3/4 in npt(f)
Line Length‡	Up to 500 ft (152.5 m)
Dispense Points	3 to 4
Annual Usage	Up to 35,500 gal (132,000 l)
Typical Applications.....	High flow, medium pressure, maintenance facility dispensing motor oil, gear oil, automatic transmission fluid, hydraulic fluid

Ordering Information

Fire-Ball 425 6:1 Pump	
238108	6:1 Universal Oil Pump

Pump Performance



238108

Fire-Ball® 425 10:1

Air-Powered Oil Pumps and Packages

Features and Benefits

- In-line design with fewer parts for less pump wear
- Differential air motor ensures smooth pumping
- Double-acting pump provides reliable fluid flow

Typical Applications

- Lubricant transfer
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils

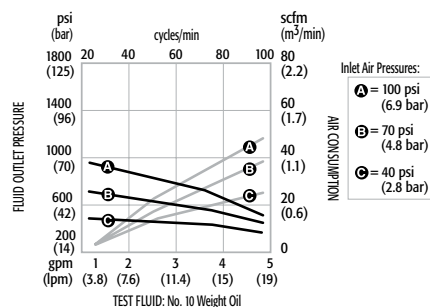
Technical Specifications

Cycles per Gallon.....	19.6 (5.2 liters)
Fluid Flow gal/min @ 80 cpm	4.1 (15.4 liters)
Maximum Fluid Pressure	1800 psi (124 bar)
Air Motor Effective Diameter.....	4.25 in (107.9 mm)
Air Operating Range	40-180 psi (2.8-12 bar)
Approx. Air Use and Flow @ 100 psi and 80 cpm	32 scfm @ 4.1 gpm (.555 m ³ /min @ 15.4 lpm)
Wetted Materials	Steel, Polyurethane, Aluminum, Nitrile
Air Inlet Port Size	1/2 in npt(f)
Fluid Inlet Port Size	1-1/2 in npt(f)
Fluid Outlet Port Size.....	3/4 in npt(f)
Line Length‡	Up to 750 ft (228.6 m)
Dispense Points	3 to 4
Annual Usage	Over 35,500 gal (132,000 l)
Typical Applications.....	Long distance, maintenance facility dispensing motor oil, gear oil, automatic transmission fluid, hydraulic fluid

Ordering Information

Fire-Ball 425 10:1 Pump	
205626	10:1 Universal Oil Pump
222065	10:1 Oil Pump, 55 gal (400lb) drum size, cover mount
222095	10:1 Oil Pump, 55 gal (400lb) drum size, bung mount

Pump Performance



205626

‡ Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® Oil Pump Packages

Air-Powered Oil Pumps and Packages

Mini Fire-Ball 225 and Fire-Ball 300 Ordering Information

Packages	Portable	Cover-Mounted	Bung-Mounted		Universal	
Container Size	16 gal (60 l)		55 gal (200 l)		275 gal (1040 l)	Universal
Mini Fire-Ball 225, 3:1 Package	246903 ⁽⁴⁾	246904 ⁽⁴⁾	246906 ⁽⁴⁾	246907 ^{(3), (4)}		248230 ^{(3), (4)}
Mini Fire-Ball, 225 3:1 Pump	248097 ^{(1), (3)}					246775
Fire-Ball 300, 5:1 package	225728 ^{(2), (4)}	225094 ^{(3), (4)}	225642 ^{(3), (4)}	225640 ^{(3), (4)}	225931 ^{(3), (4)}	225852 ^{(3), (4)}
Fire-Ball 300 Pump	203872		203857	204254	222087	203876
Dispense/Hose Fitting Kit	237075	222063				222062
Fluid Hose	6 ft x 1/2 in (1.8 m x 12.7 mm)					1.5 ft x 1/2 in (0.5 m x 9.5 mm)
Air Hose	—	6 ft x 3/8 in (1.8 m x 9.5 mm)				1.5 ft x 3/8 in (0.5 m x 9.5 mm)
Air Regulator	224512			—	—	—
Cover	204574		200326	—	—	—
Caster Base	203622	—	—	—	—	—
Bung Adapter for 300, 5:1	—	—	—	222308		—
225, 3:1 Manual	309868					
300, 5:1 Manual	307884	307883				306520

⁽¹⁾ 248097 includes suction tube (15C502) and bung adapter (222308)

⁽²⁾ Use 3/8 in (9.5 mm) installation kit (224512) as required

⁽³⁾ Use 3/8 in (9.5 mm) air regulator 109075 as required; must be ordered separately

⁽⁴⁾ Order low-level cut-off 203688 (1 1/2 inch NPT) separately for metered dispense systems

Fire-Ball 425 Package Ordering Information

Packages	Cover-Mounted	Bung-Mounted	Universal Supply	Wall-Mounted
Container Size	55 gal (200 l)		Universal	
Fire-Ball 425, 3:1 Package	—	—	—	244846 ⁽³⁾
Fire-Ball 425, 3:1 Pump	—	—	—	237526
Fire-Ball 425, 6:1 Package	—	—	—	244628 ⁽³⁾
Fire-Ball 425, 6:1 Pump	—	—	—	238108
Fire-Ball 425, 10:1 Package	225782 ^{(1) (2)}	225786 ^{(1) (2)}	225853 ^{(1) (2)}	244847
Fire-Ball 425, 10:1 Pump	222065	222095	205626	205626
Hose/Fitting Kit	222066		222068	
Fluid Hose	6 ft x 3/4 in (1.8 m x 19.05 mm)		1.5 ft x 3/4 in (0.5 m x 19.05 mm)	
Air Hose	6 ft x 1/2 in (1.8 m x 12.7 mm)		1.5 ft x 1/2 in (0.5 m x 12.7 mm)	
Cover	200326	—	—	—
Filter Regulator	—	—	—	217072
Air Shutoff Valve	—	—	—	110225
Fluid Shutoff Valve	—	—	—	108537
Wall Mount Bracket	—	—	—	238245
Instruction Manual	307883		306520	309351

⁽¹⁾ Use 1/2 in (12.7 mm) air regulator (104266) and air pressure gauge (100960) as required; must be ordered separately—see mounting accessories section

⁽²⁾ Order low-level cut off (203688) separately for metered dispense systems—see mounting accessories section

⁽³⁾ Includes pump plus: Filter Regulator (217072), Hose and Fitting Kit (222068), Air Shutoff Valve (110225), Fluid Shutoff (108537), Wall Mount Bracket, (238245)

Cover-mounted



Bung-mounted



Universal Supply



Portable

Fluid Dispense Packages

Air-Powered Oil Pumps and Packages

Mini Fire-Ball® 225, 3:1 Bulk-Oil Dispensing Packages

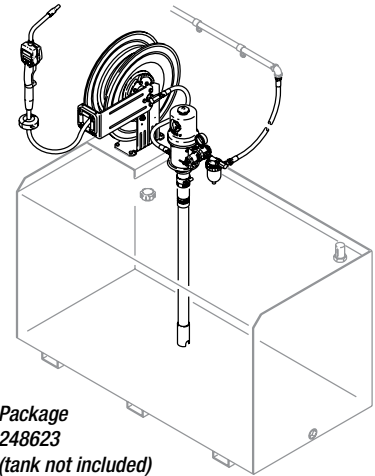
Mini Fire-Ball 225, 3:1 Pump Package	
248623*	Includes: Mini Fire-Ball 225, 3:1 Universal pump with bung adapter and down tube (248097), SD Series reel with 50 ft (15.2 m) x 1/2 in (12.7 mm) fluid hose (HPM65B), LDM5 meter (256215)
248622*	Includes: Mini Fire-Ball 225, 3:1 Universal pump with bung adapter and down tube (248097), SD Series reel with 25 ft (7.6 m) x 1/2 in (12.7 m) fluid hose (HPM33B), LDM5 meter (256215)

*Order 218549 (1/2 in x 24 in) hose reel inlet kit separately NOTE: Tanks not included

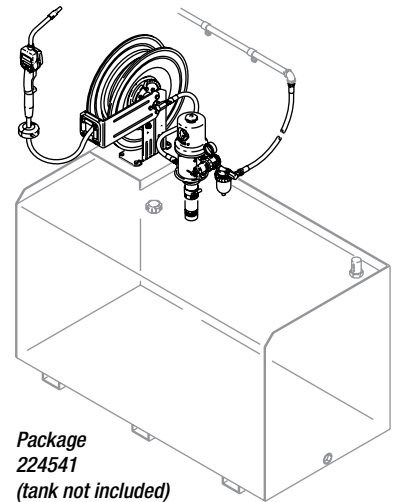
Fire-Ball 300, 5:1 Deluxe Bulk-Oil Dispensing Packages

Fire-Ball 300, 5:1 Pump Packages	
241633*	Includes: Fire-Ball 300, 5:1 pump universal (203876), 3/8 in (9.5 mm) regulator/gauge (109075), 3/8 in (9.5 mm) x 3/8 in (9.5 mm) nipple (156849), 2 in (50.8 mm) bung adapter (222308), SD Series reel with 25 ft (7.6 m) x 1/2 in (12.7 mm) hose (HPM33B), SDM5 meter (255350)
224541*	Includes: Fire-Ball 300, 5:1 pump universal (203876), 3/8 in (9.5 mm) regulator/gauge (109075), 3/8 in (9.5 mm) x 3/8 in (9.5 mm) nipple (156849), 2 in (50.8 mm) bung adapter (222308), SD Series reel with 50 ft (15.3 m) x 1/2 in (12.7 mm) hose (HPM65B), 18 in (45.7 cm) hose (220598), 90° swivel (inlet on hose reel) (157416), SDM5 meter (255350)
244038*	Includes: Fire-Ball 300, 5:1 pump universal (203876), 3/8 in (9.5 mm) regulator/gauge (109075), 3/8 in (9.5 mm) x 3/8 in (9.5 mm) nipple (156849), 2 in (50.8 mm) bung adapter (222308), SD Series reel with 50 ft (15.3 m) x 1/2 in (12.7 mm) hose (HPM65B), 18 in (45.7 cm) hose (220598), 90° swivel (157416), SDP5 meter (255200)
224534*	Dispensing from Bench-Top Tanks with Fire-Ball 300, 5:1 Pump Package. Includes: Fire-Ball 300, 5:1 pump, Universal (203876), 3/8 in (9.5 mm) regulator/gauge (109075), Air filter (106148), 3/8 in (9.5 mm) x 3/8 in (9.5 mm) nipple (156849), SD Series reel with 50 ft (15.3 m) x 1/2 in (12.7 mm) hose (HPM65B), Drain valve (106151), 72 in (182.9 cm) hose kit (222063), Thermal relief valve (237893), 90° swivel (157416), SDM5 Meter (255350)

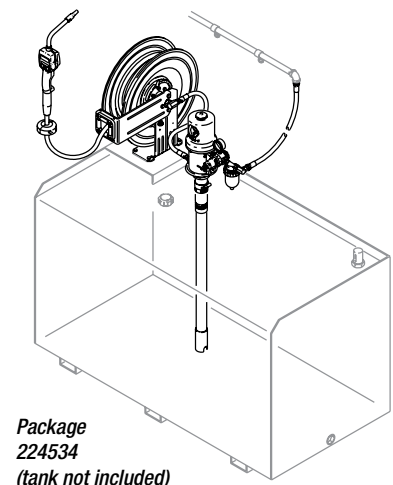
*Order 218549 (1/2 in x 24 in) hose reel inlet kit separately NOTE: Tanks not included



Package
248623
(tank not included)



Package
224541
(tank not included)



Package
224534
(tank not included)

Fire-Ball® and Oil Pump Accessories

Air-Powered Oil Pumps and Packages

Hose and Fittings Kits for Mini Fire-Ball 225, 3:1 and Fire-Ball 300, 5:1 Pumps	
222062	18 in (0.5 m) for connecting wall-mounted Mini Fire-Ball 225, 3:1 and Fire-Ball 300, 5:1 pumps to piping. Includes air hose (204560) with swivel elbow (155494), fluid hose (220598) with swivel elbow (155470). Instruction manual 306520
222063	6 ft (1.8 m) for use with drum-mounted Mini Fire-Ball 225, 3:1 and Fire-Ball 300, 5:1 pumps. Includes air hose (203320) with swivel elbow (155494), fluid hose (220591) with swivel elbow (155470). Instruction manual 307883
Dispense Kits for Mini Fire-Ball 225, 3:1 and Fire-Ball 300, 5:1 Pumps	
237075	6 ft (1.8 m) for use with portable lubricators powered by the Fire-Ball 300, 5:1. Includes fluid hose (220591) and SDM5 gear lube valve (255349). Instruction manual: 307884
Hose and Fittings Kits for Fire-Ball 425, 3:1, 6:1 and 10:1	
222068	18 in (0.5 m) for connecting wall-mounted Fire-Ball 425, 10:1 pumps to piping. Includes air hose (218093) with swivel elbow (155470), fluid hose (109108) with swivel elbow (160327). Instruction manual: 306520
238246	24 in (0.6 m) for use with Fire-Ball 425, 3:1 and 6:1 wall-mounted pumps to piping. Includes air hose (218093) with swivel elbow (155470), fluid hose (238247) with swivel elbow (160327)
222066	6 ft (1.8 m) for use with drum-mounted Fire-Ball 425, 10:1 pumps. Includes air hose (205418) with swivel elbow (155470), fluid hose (109105) with swivel elbow (160327). Instruction manual: 307883
Suction Kits	
236054	6 ft (1.8 m) Suction Kit for 55-gal. (200 l) drums. Includes: 55-gal. (200 l) drum tube, bung adapter and 6 ft (1.8 m) of 3/4 in fluid hose with 3/4 in ID x 1-1/2 in bushing to adapt to any universal Graco oil pump. Allows use of Fast-Ball 1:1, Mini Fire-Ball 225, 3:1, Fire-Ball 300, 5:1 or Fire-Ball 425, 10:1 universal pumps with barrels. Order wall brackets separately. Use with low-level cut-off (203688) when metering fluids. Instruction manual: 308335
Drum Covers	
200326	Cover for open-head 55 gal (200 l) drums. Use with Mini Fire-Ball 225, 3:1, Fire-Ball 300, 5:1 or Fire-Ball 425, 10:1 pump. Use adapter 160754 for cover-mounting bung-style pumps
204574	Cover for open-head 16 gal (60 l) or 70 lb (32 kg) drums. Mounts Fast-Ball 1:1, Mini-Fire-Ball or Fire-Ball pumps
222058	Cover for 5 gal (20 l) pails. Mounts Fast-Ball 1:1, Mini Fire-Ball 225, 3:1, Fire-Ball 300, 5:1 and 15:1 pumps. Bung adapter (222308) and bung adapter plate (160754) sold separately
160754	Bung-adaptor plate for 55 gal (200 l) or 16 gal (60 l) covers. Mounts to 55 gallon (400 lb; 200 l), 16 gal (120 lb; 60 l) drum or 5 gal (20 l) pail covers and converts mounting to standard 2 npt bung opening. Allows use of bung-mounted pumps with drum covers
Wall-Mounting Brackets	
203987	For universal Fast-Ball 1:1, Mini Fire-Ball 225, 3:1, Fire-Ball 300, 5:1 and Fire-Ball 425, 10:1 pumps. Clamps onto universal pump tube
238245	For use with Fire-Ball 425, 3:1, 6:1 and 10:1 pumps. Mounts directly to pump flange
236778	For use with Fire-Ball 425, 3:1, Dyna-Star 1/4:1 and Power-Star 1:1 pumps. Clamps to pump tube and provides mounting to wall surface by flange
Clamps	
203156	Open-drum pump clamp. Attaches to side of open-head drum and mounts on any size pump except Fire-Ball 425, 3:1
210880	Open-drum pump clamp for Fire-Ball 300, 5:1 and Fire-Ball 425, 10:1 pumps. Clamps onto pump tube and attaches to open-drum lip
Tools for Working on Fire-Ball Air Motors	
207579	Padded pliers
171818	Poppet gauge
168085	Insert tool
Carts	
203650	Cart for 5, 10 and 16 gal (20, 40, and 60 l) drums. Drums fit into recess on formed base. Rim clamps secure drum to cart. Use with pail clamp (159952) when using cart with 5 gal (20 l) pails
222243	Heavy-Duty Cart with Pneumatic Wheels for 120 lb (55 kg) drums. Used for moving lubrication equipment over rough terrain. Requires: Hold down kit (222061)
111470	55 gal (200 l) Drum Truck. Heavy-duty drum truck secures 55 gal (200 l) drum on roll-around base



200326



204574



160754



203987



203156



210880



203650



111470

Fire-Ball® and Oil Pump Accessories

Air-Powered Oil Pumps and Packages

Ordering Information

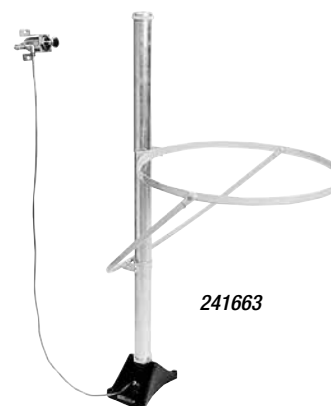
Portable Bases	
205054	Band Dolly for 5 gal (20 l) pails (11-1/2 in ID)
204144	Band Dolly for 10 and 16 gal (40 and 60 l) drums (14 in ID)
203622	Caster Base for 5, 10 and 16 gal (20, 40 and 60 l) drums
Drum Elevator	
241663	Air-powered elevator to speed-up 55 gal (200 l) drum changes. Maximum raised height is 39.5 in (100.3 cm). Includes cover support (207562), drum elevator (204385), and air control kit (207561)
Suction Tubes For Pumps	
238592	For 16 gal (60 l) cover-mounted Fast-Ball 1:1, Mini Fire-Ball 225, 3:1, Fire-Ball 300, 5:1 and Fire-Ball 425, 10:1. Use bung adapter 222308 on all current production models. Includes (191126) 14-1/2 in (0.36 m) extension (110127) foot spacer
238593	For 55-gal (200 l) cover-mounts. Includes (191128) 21-3/4 in (0.55 m) extension (110127) foot spacer
238595	For 55 gal (200 l) bung-mounted Fast-Ball 1:1, Mini Fire-Ball 225, 3:1, Fire-Ball 300, 5:1 and Fire-Ball 425, 10:1. Use bung adapter 222308 on all current production models. Includes (191130) 26 in (0.66 m) extension (110127) foot spacer
238596	For 275-gal (1100 l) bung-mounts. Includes (191131) 36 in (0.91 m) extension (110127) foot spacer
15C502	Universal Down Tube 1-1/2 in tube marked for standard container lengths from 20-41 in (0.51-1.04 m)
Bung Adapters	
222308	For Fast-Ball 1:1; Mini Fire-Ball 225, 3:1; Fire-Ball 300, 5:1; and Fire-Ball 425, 10:1 Pumps. Allows direct mounting of all universal length and extended Fast-Ball 1:1, Mini Fire-Ball 225, 3:1, Fire-Ball 300, 5:1 and Fire-Ball 425, 10:1 pumps into standard 2 npt drum bung
238125	For Mini Fire-Ball 225, 3:1; Fire-Ball 300, 5:1; and the Fire-Ball 425, 10:1. Includes double tap bushing (191075), 1 ft 3/8 in hose (238370), and 90° 3/8 in adapter (155494) for mounting universal pumps to tanks (see 308403 for details)
214583	For Fast-Flo 1:1 Pumps, allows direct mounting of full-length pump into standard 2 npt drum bung. Comes with bushing sleeve (172405)
187754	Acetal Bung Adapter includes (100220) thumbscrew (for Fire-Ball 300, 15:1 SST undercoating pump)
176684	Bung Adapter for Suction Kit (203992). Includes (100220) thumbscrew
Sealed Bung Adapters (prevents rain water and other fluids from entering drum when pump is outdoors.)	
204076	Sealed bung adapter for full-length Fire-Ball with 2-1/8 in (53.9 mm) bung and Mini Fire-Ball 225, 3:1 (2.140 inch diameter)
224579	Sealed bung adapter for universal length Fire-Ball pumps, 2.159 inch diameter (will not fit Mini Fire-Ball 225, 3:1 or old style pumps with bottom foot valve)
217359	Sealed bung adapter for Fast-Flo pumps; can be used with suction kit 236054
Low-Level Cut-Offs (Prevents air from entering pump by closing intake when fluid supply to pump is exhausted. Can be used with suction hose kit or standard suction tube without changing tube length.)	
203688	Low-level cut-offs for Fast-Ball and Fire-Ball pumps that have a universal design with suction tube extension supplying metered outlets; replaces stand-off suction tube; 1.5 npt (f) inlet. 3 in (76 mm) h
Thermal Relief Valve Kits (includes valve, hose and fittings)	
235998	Mini Fire-Ball 225, 3:1 thermal relief valve rated to 600 psi (41 bar)
237893	Fire-Ball 300, 5:1 and Fire-Ball 425, 6:1 thermal relief valve rated to 900 psi (62 bar)
248296	Fire-Ball 300, 5:1 and Fire-Ball 425, 6:1 thermal relief valve rated to 900 psi (62 bar) (same as 237893 minus bung adapter and swivel. Includes 6 foot hose)
237601	Fire-Ball 425, 3:1 thermal relief valve rated to 600 psi (41 bar)
240429	Fire-Ball 425, 10:1 thermal relief valve rated to 1600 psi (110 bar)
248324	Fire-Ball 425, 10:1 thermal relief valve rated to 1600 psi (110 bar) (same as 240429 minus bung adapter and swivel. Includes 6 foot hose)
238899	Diaphragm pump thermal relief valve rated to 150 psi (10.4 bar)
112353	Diaphragm pump thermal relief valve for fuel dispense; rated to 50 psi (3.4 bar), valve only



204144



203622



241663



203688

Fire-Ball® and Oil Pump Accessories

Air-Powered Oil Pumps and Packages

Ordering Information

Bleed-Type Air Shut-Off Valves (rated to 250 psi [17.4 bar]) Female ends		
110223	1/4 in (6.4 mm)	
110224	3/8 in (9.5 mm)	
110225	1/2 in (12.7 mm)	
110226	3/4 in (19.1 mm)	
Fluid Shut-Off Valves (rated to 2000 psi [138 bar]) For isolating oil dispense lines.		
108458	1/2 in (12.7 mm)	
240418	3/8 in (9.5 mm)	
108537	3/4 in (19.1 mm)	
110314	1 in (25.4 mm)	
240417	Fluid T-Strainers 60 Mesh Strainer, 750 psi (51 bar) working pressure. Prevents foreign material from entering dispense lines. Not for use with grease lines. 1/2 in npt(f) swivel x 1/2 in npt(m) ports	
Mesh Strainer Replacement for 240417		
3 replacement Elements	25 replacement Elements	Mesh
238433	238434	40 mesh
238431	238432	60 mesh (standard)
238429	n/a	100 mesh
Y-Strainers 400 psi (28 bar) max. working pressure filters material before it enters the pump. 20 mesh screen.		
Y-Strainer	Replacement Screens	Inlet/Outlet
101078	180199	3/4 npt(f) both ends
110877	110906	1/2 npt(f) both ends
110878	110907	1 npt(f) both ends

Mounting Accessories						
Pump	Fast-Ball 1:1	Mini Fire-Ball 225, 3:1	Fire-Ball 300, 5:1	Fire-Ball 425, 3:1	Fire-Ball 425, 6:1	Fire-Ball 425, 10:1
Bung Adapter		222308		N/A†	N/A†	222308
Connection Hose Kit	222118 18 inch (45.7 cm) 222119 72 inch (182.8 cm)	222062 18 inch (45.7 cm) 222063 72 inch (182.8 cm)		238246 24 inch (60.9 cm)		222068 18 inch (45.7 cm) 222066 72 inch (182.8 cm)
Wall Mounting Bracket		203987		238245		203987
Thermal Relief Kit	-	235998	237893	237601	240429	
Air Regulator and Gauge	110147	109075		104266/100960		
Air Filter	110146	106148		106149		
Air Lubricator	110148	214847		214848		
FRL*	110149	110150		217072		
Airline Shutoff Valve	110223	110224		110225		
Fluid Shutoff Valve	108537	108458		108537		
Fluid Outlet Filter		240417		101078	—	
Low-Level Cutoff		203688				
Suction Hose Kit		236054		N/A**	N/A**	

*Filter, Regulator, Lubricator and Gauge

**Recommend 1-1/2 in, 6 ft hose assembly as suction kit

†Must be wall-mounted or flange-mounted



108458



240417



101078



NXT™ High-Flo®

Air-Powered Oil Pumps and Packages

Features and Benefits

- Move large amounts of oil fast—dispenses up to 31 gallons of oil per minute
- Tested to outperform and outlast all other pumps on the market with its long-life packing design
- Models available with intuitive, easy-to-use DataTrak™ controls—gives you pump diagnostics, material usage tracking and pump runaway protection
- Reduces icing and noise—new NXT air motor is up to 50% quieter than previous models

Typical Applications

- In-plant to supply long-pipe runs or large volume header systems with multiple dispense locations
- Fill remote reservoirs or feed an automated lubrication system
- Transfer and dispense large amounts of lubricant to supply a production process
- Mines/construction for rapid refill of lube trucks and to service off-road equipment

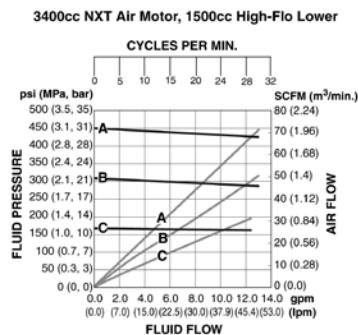
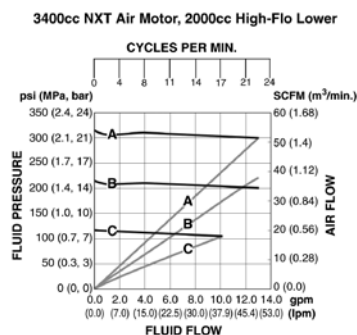


Package Number with DataTrak		247888	247889	247892	247893
Package Number without DataTrak		24D602	24D603	24D606	24D607
Pump Specifications	Ratio	3.5:1	4.5:1	6:1	6:1
	Mounting	Wall (255143)	Wall (255143)	Wall (255143)	Stand (218742)
	Pump with DataTrak and thermal relief kit	24D590	24D591	24D594	24D594
	Pump w/o DataTrak and thermal relief kit	24D596	24D597	24D600	24D600
	Output per Cycle	2000cc	1500 cc	2000 cc	2000 cc
	Output at 60 CPM*	31.5 gpm (119.2 lpm)	23.2 gpm (87.8 lpm)	31.5 gpm (119.2 lpm)	31.5 gpm (119.2 lpm)
	Motor Size	NXT 3400		NXT 6500	
	Maximum Fluid Pressure	350 psi (24.1 bar)	450 psi (31.0 bar)	500 psi (35.2 bar)	
	Maximum Air Input Pressure	100 psi (6.9 bar)		75 psi (5.2 bar)	
Manuals	System Manual	312862			
	Pump Manual	311211		311831	
	Pump Lower Manual	311690		311832	
	Motor Manual	311238			
Inlet/ Outlet	Pump Inlet Size	1 1/2 in npt (f)		2 in npt (f)	
	Pump Outlet Size	1 in npt (f)		2 in npt (f)	
Hoses	3/4 in x 4 ft Air Hose	110048			
	1 in x 6 ft Fluid Hose	115042		247969	

*Graco recommends 20 CPM or less for supply applications

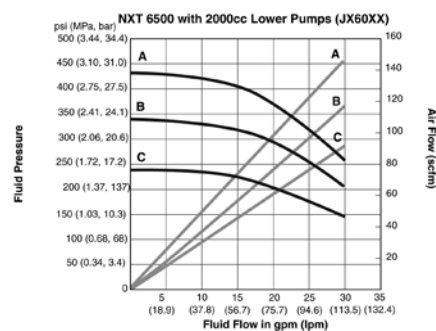
Performance Charts

A = 100 psi (7.0 bar) air pressure
B = 70 psi (4.9 bar) air pressure
C = 40 psi (2.8 bar) air pressure



Test Fluid is No. 10 Weight Oil for all pumps

A = 70 psi (4.9 bar) air pressure
B = 55 psi (3.7 bar) air pressure
C = 40 psi (2.8 bar) air pressure



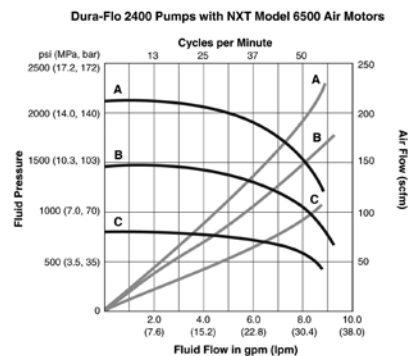
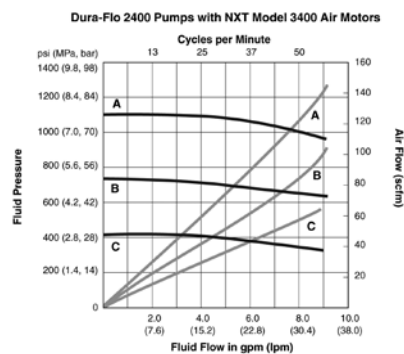
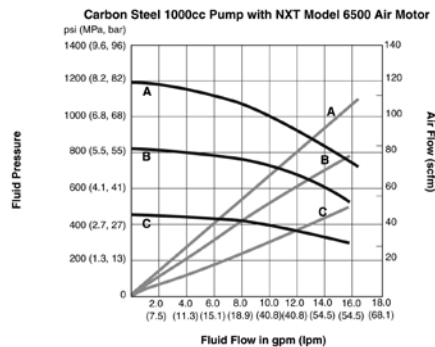
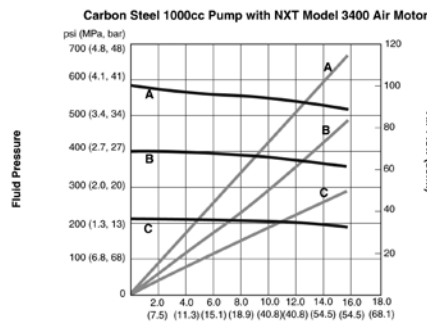
NXT™ High-Flo®

Air-Powered Oil Pumps and Packages

Performance Charts

A = 7 bar (100 psi) air pressure or 105 bar (1500 psi) hydraulic oil pressure
 B = 4.9 bar (70 psi) air pressure or 75 bar (1050 psi) hydraulic oil pressure
 C = 2.8 bar (40 psi) air pressure or 42 bar (600 psi) hydraulic oil pressure

Test Fluid is No. 10 Weight Oil for all pumps



Air-Powered Oil Pumps and Packages

Package Number with DataTrak		247890	247894	247891	247895
Package Number without DataTrak		24D604	24D608	24D605	–
Pump Specifications	Ratio	6:1	10:1	12:1	23:1
	Mounting	Wall (255143)			
	Pump with DataTrak and thermal relief kit	24D592	24D595	24D593	–
	Pump w/o DataTrak and thermal relief kit	24D598	24D601	24D599	–
	Output per Cycle	1000cc		580cc	
	Output at 60 CPM*	17.4 gpm (65.9 lpm)		9.2 gpm (34.8 lpm)	
	Motor Size	NXT 3400	NXT 6500	NXT 3400	NXT 6500
	Max. Fluid Pressure	620 psi (42.7, 4.3 bar)	1180 psi (81.3 bar)	1190 psi (82.1 bar)	1725 psi (118.9 bar)
	Max. Air Input Pressure	100 psi (6.9 bar)			75 psi (5.2 bar)
Manuals	System Manual	312862			
	Pump Manual	311833		311826	
	Pump Lower Manual	311717		311825	
	Motor Manual	311238			
Inlet/ Outlet	Pump Inlet Size	2 in npt(f)			
	Pump Outlet Size	1 1/2 in npt(m)			
Hoses	3/4 in x 4 ft Air Hose	110048			
	1 in x 6 ft Fluid Hose	115042			

*Graco recommends 20 CPM or less for supply applications

Grease Pumps Quick Reference

Technical Specifications and Selection Chart

	Annual Usage	Line Length [‡]	Dispense Points	Air Inlet	Material Inlet	Material Outlet
	LD Series , 50:1					
	7,000 lb (3,125 kg)	300 ft (91 m)	1 to 2	1/4 in npt(f)	Priming Piston	1/4 in npt(f)
	Mini Fire-Ball 225, 50:1					
	10,000 lb (4,535 kg)	100 ft (30 m)	1	3/8 in npt(f)	Slotted	1/4 in npt(f)
	Fire-Ball 300, 50:1					
	10,000 lb (4,535 kg)	250 ft (76 m)	1 to 2	3/8 in npt(f)	Slotted	1/4 in npt(f)
	Fire-Ball 425, 50:1					
	20,000 lb (9,072 kg)	250-500 ft (76-152 m)	4 or more	1/2 in npt(f)	Slotted	3/8 in npt(f)
	Fire-Ball 425, 75:1					
	20,000 lb (9,072 kg)	250-500 ft (76-152 m)	4 or more	1/2 in npt(f)	Slotted	3/8 in npt(f)
	Fire-Ball 300, 15:1					
	10,000 lb (4,535 kg)	250 ft (76 m)	1 to 2	3/8 in npt(f)	Slotted	1/4 in npt(f)
	Fire-Ball 425, 10:1					
	20,000 lb (9,072 kg)	250-500 ft (76-152 m)	4 or more	1/2 in npt(f)	Slotted	1 in npt(f)

[‡] Consult your local authorized Graco representative for line or pipe sizing

Grease Pumps Quick Reference

Technical Specifications and Selection Chart



Annual Usage	Line Length [‡]	Dispense Points	Pump Ratio(s)	Output Per Cycle	Fluids
Check-Mate, 14:1**					
20,000 lb (9,072 kg)	Up to 100 ft (76 m)	1	14:1	500 cc	Grease
Check-Mate, 26:1					
20,000 lb (9,072 kg)	Up to 250 ft (76 m)	1-2	26:1	500 cc	Grease
Check-Mate, 29:1					
20,000 lb (9,072 kg)	Up to 250 ft (76 m)	4 or more	29:1	250 cc	Grease
Check-Mate, 55:1					
20,000 lb (9,072 kg)	Up to 250 ft (76 m)	1-2	55:1	250 cc	Grease
Check-Mate, 63:1**					
20,000 lb (9,072 kg)	Up to 250 ft (76 m)	1-2	63:1	100 cc	Grease
Check-Mate, 68:1**					
20,000 lb (9,072 kg)	Up to 500 ft (152 m)	1-2	68:1	200 cc	Grease

[‡] Consult your local authorized Graco representative for line or pipe sizing
 **NXT Check-Mate pump is available in floor stand or RAM Package.

LD Series 50:1 Pump

Air-Powered Grease Pumps and Packages

Features and Benefits

- Built-in thermal relief protects your equipment from thermal expansion
- Three inch air motor provides more power to create better flow
- Cup and plate design eliminates the need for O-rings that wear out faster

Typical Applications

- Medium pressure, low to medium volume grease dispense
- Automotive dealerships
- Fast lube centers
- Service shops
- Lube trucks

Typical Fluids Handled

- Grease up to NLGI #2

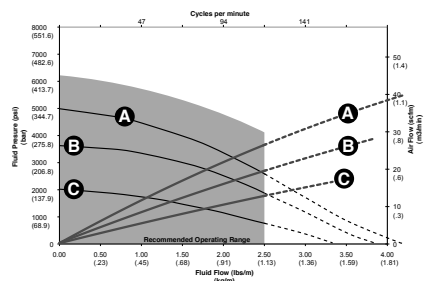
Technical Specifications

Maximum Fluid Working Pressure	7500 psi (517 bar, 51.7 MPa)
Fluid Pressure Ratio	50:1
Air Operation Range	20 to 150 psi (1.37 to 10.3 bar)
Recommended Air Pressure (for optimum life)	<125 psi (8.6 bar, 0.86 MPa)
Max Recommended Pump Speed	120 cycles per minute
Cycles Per Gallon/pound (l/kg)	247 cycles per pound (103 cycles per kg)
Recommended Pump Speed (for maximum life)	60 cycles per minute or lower
Wetted Parts	Steel, brass, nitrile rubber, polyurethane, UHMWPE, acetal
Sound Pressure Level	72.9 dB(a)
Sound Power Level	82 dB(a)
Approximate Weight	35 pound drum—11.2 pounds (5.1 kg), 120 pound drum—15.0 pounds (6.8 kg), 400 pound drum— 17.0 pounds (7.7 kg)
Air Inlet	1/4 in
Fluid Inlet	Priming Piston
Fluid Outlet	1/4 in
Free Flow*	5lb/min
Annual Usage	Up to 7,000 lb (3175 kg)

Ordering Information

LD Series 50:1 Pumps	
24G600	35 lb (16 kg) Grease Pump - 50:1
24G603	120 lb (55 kg) Grease Pump - 50:1
24G606	400 lb (180 kg) Grease Pump - 50:1

Pump Performance



LD Series 50:1 Pump

Mini Fire-Ball® 225, 50:1

Air-Powered Grease Pumps and Packages

Features and Benefits

- Non-corrosive air motor design for long life
- Double-acting pump ensures smooth fluid flow
- Robust grease inlet cage withstands the most abusive handling

Typical Applications

- Medium pressure, low to medium volume grease dispense
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube and service centers
- Fleet service facilities
- Lube trucks
- Mining
- In-plant

Typical Fluids Handled

- Grease up to NLGI #2

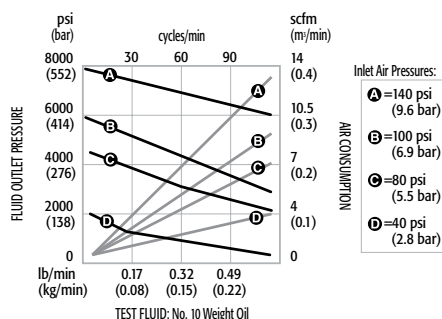
Technical Specifications

Continuous-Duty Flow Rate	0.32 lb/min (0.15 kg/min)
Maximum Fluid Pressure	8400 psi (578 bar)
Air Motor Effective Diameter	2.25 in (57.2 mm)
Operating Range	40-140 psi (3-10 bar)
Approximate Air Use	7.3 scfm @ 0.41 lb/min (.18 kg/min) @ 100 psi @ 80 cpm
Wetted Materials	Steel, Urethane, Aluminum, Buna-N, Brass, Ethylene, Delrin®
Air Inlet Port Size	3/8 in npt(f)
Material Inlet	Slotted
Material Outlet	1/4 in npt(f)
Line Length‡	Up to 100 ft (30.5 m)
Dispense Points	1
Annual Usage	Up to 10,000 lb (4,535 kg)

Ordering Information

Mini Fire-Ball 225 50:1 Pumps	
246909	35 lb (16 kg) Grease Pump - 50:1
246780	120 lb (55 kg) Grease Pump - 50:1
246781	400 lb (180 kg) Grease Pump - 50:1

Pump Performance



‡ Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® 300, 15:1

Air-Powered Grease Pumps and Packages

Features and Benefits

- Non-corrosive air motor design for long life
- Double-acting pump ensures smooth fluid flow
- Robust grease inlet cage withstands the most abusive handling

Typical Applications

- Medium pressure, low to medium volume grease dispense
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube and service centers
- Fleet service facilities
- Lube trucks
- Mining
- In-plant

Typical Fluids Handled

- Grease up to NLGI #2

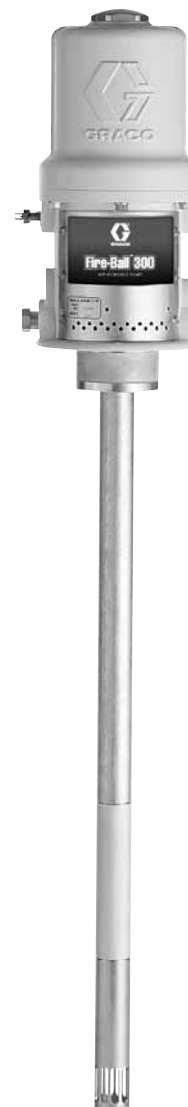
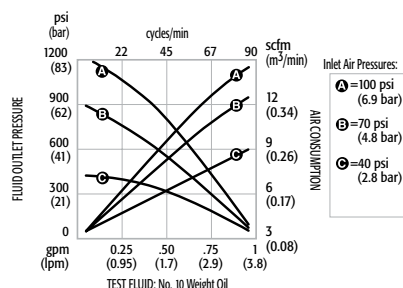
Technical Specifications

Continuous-Duty Flow Rate	0.7 gpm
Maximum Fluid Pressure	2700 psi (186 bar)
Air Motor Effective Diameter	3 in (7.6 cm)
Operating Range	40-180 psi (2.8-12.5 bar)
Approximate Air Use	17 cfm@ 100 psi (7 bar)
Wetted Materials	CS, AL, Leather, PTFE, Rubber
Air Inlet Port Size	3/8 in npt(f)
Material Inlet	1 in npt(f) Straight Inlet
Material Outlet	1/4 in npt(f)
Line Length‡	Up to 250 ft (76.2 m)
Dispense Points	1 to 2
Annual Usage	Up to 10,000 lb (4,535 kg)

Ordering Information

Fire-Ball 300 15:1 Pumps	
206405	35 lb (16 kg) Grease Pump - 15:1
206699	120 lb (55 kg) Grease Pump - 15:1
206700	400 lb (180 kg) Grease Pump - 15:1

Pump Performance



‡ Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® 300, 50:1

Air-Powered Grease Pumps and Packages

Features and Benefits

- Non-corrosive air motor design for long life
- Double-acting pump ensures smooth fluid flow
- Robust grease inlet cage withstands the most abusive handling

Typical Applications

- Medium pressure, low to medium volume grease dispense
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube and service centers
- Fleet service facilities
- Lube trucks
- Mining
- In-plant

Typical Fluids Handled

- Grease up to NLGI #2

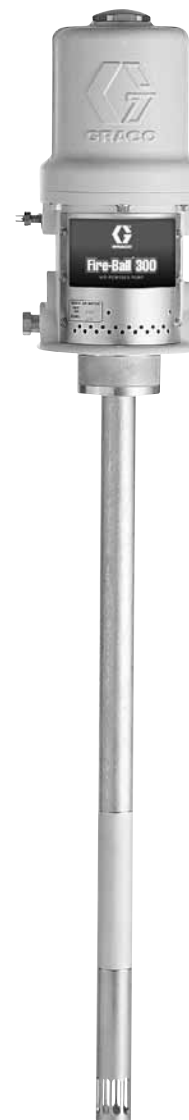
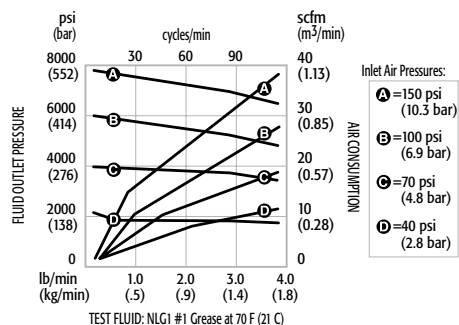
Technical Specifications

Continuous-Duty Flow Rate	1.19 lb/min. (.54 kg/min.)
Maximum Fluid Pressure	8400 psi (580 bar)
Air Motor Effective Diameter	3 in (76.2 cm)
Operating Range	30-140 psi (3.0-9.7 bar)
Approximate Air Use	22.8 cfm @100 psi (7 bar)
Wetted Materials	CS, Delrin®, Buna-N, Polyurethane
Air Inlet Port Size	3/8 in npt(f)
Material Inlet	Slotted
Material Outlet	1/4 in npt(f)
Line Length‡	Up to 250 ft (76.2 m)
Dispense Points	1 to 2
Annual Usage	Up to 10,000 lb (4,535 kg)

Ordering Information

Fire-Ball 300 15:1 Pumps	
239877	35 lb or 70 lb (16 kg or 32 kg) Grease Pump - 50:1
239887	120 lb (55 kg) Grease Pump - 50:1
239888	400 lb (180 kg) Grease Pump - 50:1

Pump Performance



Fire-Ball® 425, 10:1

Air-Powered Grease Pumps and Packages

Features and Benefits

- Non-corrosive air motor design for long life
- Double-acting pump ensures smooth fluid flow
- Robust grease inlet cage withstands the most abusive handling

Typical Applications

- Medium pressure, low to medium volume grease dispense
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube and service centers
- Fleet service facilities
- Lube trucks
- Mining
- In-plant

Typical Fluids Handled

- Grease up to NLGI #2

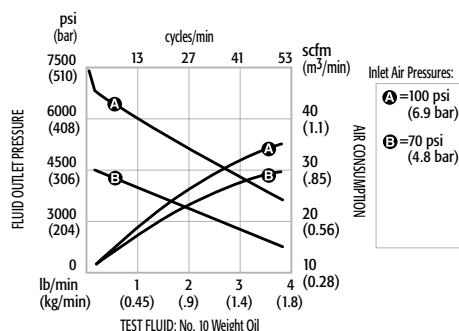
Technical Specifications

Continuous-Duty Flow Rate	3.5 gpm
Maximum Fluid Pressure	1800 psi (124 bar)
Air Motor Effective Diameter	4.25 in (10.8 cm)
Operating Range	40-180 psi (2.8-12.5 bar)
Approximate Air Use	13 cfm @100 psi (7 bar)
Wetted Materials	Steel, Brass, Aluminum, Leather, Buna-N
Air Inlet Port Size	1/2 in npt(f)
Material Inlet	Slotted
Material Outlet	1 in npt(f)
Line Length†	Up to 500 ft (152.4 m)
Dispense Points	4 or more
Annual Usage	20,000 lb or more (9,072 kg)

Ordering Information

Fire-Ball 425 10:1 Pumps	
965124	Stubby mount Fire-Ball 425, 10:1 pump only

Pump Performance



† Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® 425, 50:1

Air-Powered Grease Pumps and Packages

Features and Benefits

- Non-corrosive air motor design for long life
- Double-acting pump ensures smooth fluid flow
- Robust grease inlet cage withstands the most abusive handling

Typical Applications

- Medium pressure, low to medium volume grease dispense
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube and service centers
- Fleet service facilities
- Lube trucks
- Mining
- In-plant

Typical Fluids Handled

- Grease up to NLGI #2

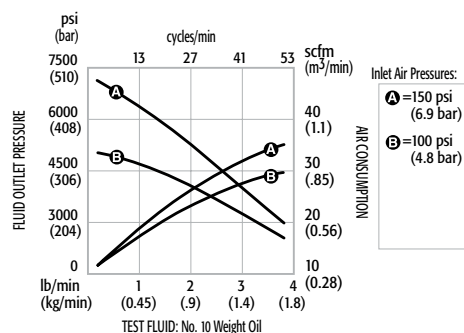
Technical Specifications

Continuous-Duty Flow Rate	3.35 lb/min (1.5 kg/min.)
Maximum Fluid Pressure	7500 psi (517 bar)
Air Motor Effective Diameter.....	4.25 in (10.8 cm)
Operating Range	40-150 psi (2.8-10.4 bar)
Approximate Air Use	19 cfm @70 psi (4.8 bar)
Wetted Materials	CS, Leather
Air Inlet Port Size	1/2 in npt(f)
Material Inlet	Slotted
Material Outlet.....	3/8 in npt(f)
Line Length‡	Up to 250 ft (76.2 m)
Dispense Points	4 or more
Annual Usage	20,000 lb or more (9,072 kg)

Ordering Information

Fire-Ball 425 50:1 Pumps	
205394	120 lb (55 kg) Grease Pump - 50:1
205395	400 lb (180 kg) Grease Pump - 50:1

Pump Performance



‡ Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® 425, 75:1

Air-Powered Grease Pumps and Packages

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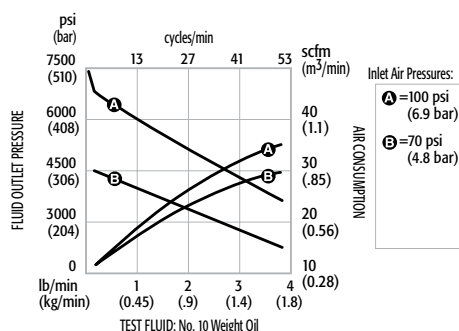
Technical Specifications

Continuous-Duty Flow Rate	1.95 lb/min (0.88 kg/min)
Maximum Fluid Pressure	7500 psi (517 bar)
Air Motor Effective Diameter	4.25 in (10.8 cm)
Operating Range	40-100 psi (2.8-7 bar)
Approximate Air Use	26 cfm @100 psi (7 bar)
Wetted Materials	CS, Leather
Air Inlet Port Size	1/2 in npt(f)
Material Inlet	Slotted
Material Outlet	3/8 in npt(f)
Line Length‡	Up to 500 ft (152.5 m)
Dispense Points	4 or more
Annual Usage	20,000 lb or more (9,072 kg)

Ordering Information

Fire-Ball 425 75:1 Pumps	
239729	120 lb (55 kg) Grease Pump - 75:1
239730	400 lb (180 kg) Grease Pump - 75:1
239731	35/70 lb (16/32 kg) Grease Pump - 75:1

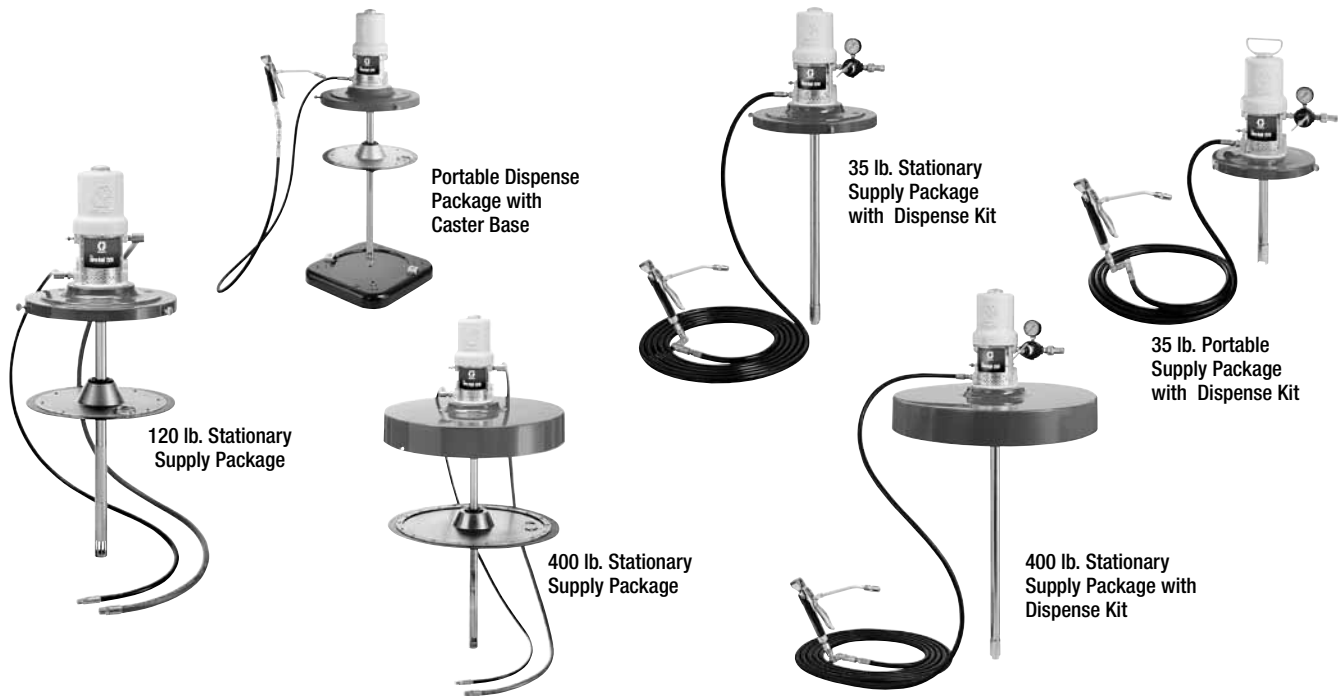
Pump Performance



‡ Consult your local authorized Graco representative for line or pipe sizing

Fire-Ball® Grease Pump Packages

Air-Powered Grease Pumps and Packages



Mini Fire-Ball® 225, 50:1 Grease Pumps and Packages

	Portable Pail Dispenser	Stationary Pail Dispenser	Cart-Mounted Pail Dispenser	Stationary Supply Package	Portable Package w/ Caster Base	Portable Package w/ 2-Wheel Cart	Stationary Supply Package
Container Size	35 lb (16 kg) pail	35 lb (16 kg) pails or 70 lb (32 kg) bulk		120 lb (55 kg)			400 lb (180 kg)
Package No.	246910 +	246911 +	246913 +	246914 +	246915 +	246916 +	246917 +
Pump Only.	246909			246780			246781
Container	—	204134		—	—	—	—
Follower Plate	220653	*	*	220654			223845
Dispense Kit	236058			222072	236058		222072
Fluid Hose	12 ft x 1/4 in (3.7 m x 6.4 mm)			6 ft x 1/4 in (1.8 m x 6.4 mm)	12 ft x 1/4 in (3.7 m x 6.4 mm)		6 ft x 1/4 in (1.8 m x 6.4 mm)
Air Hose	222059	204574	204574	6 ft x 3/8 in (1.8 m x 9.5 mm)	—	—	6 ft x 3/8 in (1.8 m x 9.5 mm)
Cover	222059	204574					200326
Cart	—	—	203650	—	203622	203650	—
Manual	309967						

+ Order 3/8 in (9.5 mm) air regulator (109075) separately * Order follower plate 220653 separately for 35 lb (16 kg) pails or 220654 for 70 lb (32 kg) bulk

Fire-Ball® 300, 15:1 Grease Pumps and Packages

	Stationary Pail Dispenser	Stationary Drum Dispenser	Cover-Mounted Drum Dispenser
Container Size lb (kg)	35 lb (16 kg)	120 lb (55 kg)	400 lb (180 kg)
Package No.	222078	220170	220171
Pump Only	206405	206699	206700
Dispense Kit	222080	222081	222081
Fluid Hose	15 ft x 3/8 in (4.6 m x 9.5 mm)	25 ft x 3/8 in (7.6 m x 9.5 mm)	25 ft x 3/8 in (7.6 m x 9.5 mm)
Drum Cover	222058	204574	200326
Instruction Manual	307882		

Fire-Ball® Grease Pump Packages

Air-Powered Grease Pumps and Packages

Fire-Ball® 300, 50:1 35-70 lb (16-32 kg) Grease Pumps and Packages

	Portable Pail Dispenser	Stationary Pail Dispenser	Cart-Mounted Pail Dispenser	Cart-Mounted Pail Topper
Container Size	35 lb (16 kg)	35 lb or 70 lb (16 kg or 32 kg)	35 lb or 70 lb (16 kg or 32 kg)	35 lb (16 kg)
Package No.	222069 *	225827 *	225773 *	226012 *
Metered Package**	245694	—	245695	—
Pump No.	239877			
Dispense Kit	222070			
Fluid Hose	12 ft x 1/4 in (3.7 m x 6.4 mm)			
Follower Plate	220653	†	†	—
Cover	222059	204574		—
Holster	—	203976		
Container	—	204134	204134	—
Cart	—	—	203650	
Elevator	—	—	—	203664
Inductor Plate	—	—	—	204351
Instruction Manual	307878			

* Use 3/8 in (9.5 mm) air regulator 109075; must be ordered separately ** Metered grease package includes 233807 Accu-Shot instead of 242056 Pro-Shot † Order follower plate 220653 for 35 lb (16 kg) containers, and follower plate 220654 for 70 lb (32 kg) containers; must be ordered separately



Fire-Ball® 300, 50:1 Packages For 120 lb (55 kg) Containers

	Portable with Caster Base	Portable with Two-Wheel Cart	Portable with Heavy-Duty Cart	Stationary Supply	Stationary Supply Topper-Inductor
Container Size lb (kg)	120 (55)	120 (55)	120 (55)	120 (55)	120 (55)
Package Number	225006 *	225026 *	222245 *	225014 *	222073 *
Metered Package	—	245696 **	—	—	—
Pump Only	239887	239887	239887	239887	239887
Dispense Kits	222070	222070	222383	222072	-
Fluid Hose	12 ft x 1/4 in (3.7 m x 6.4 mm)	—	25 ft x 1/4 in (7.6 m x 6.4 mm)	6 ft x 1/4 in (1.8 m x 6.4 mm)	6 ft x 1/4 in (1.8 m x 6.4 mm)
Air Hose	—	—	—	6 ft x 3/8 in (1.8 m x 9.5 mm)	6 ft x 3/8 in (1.8 m x 9.5 mm)
Follower Plate	220654	220654	220654	220654	—
Cover	204574	204574	222060	204574	—
Holster	203976	203976	—	—	—
Caster Base	203622	—	—	—	—
Cart	—	203650	222243	—	—
Elevator	—	—	—	—	204121
Pump Support	—	—	—	—	222074†
Hold Down Kit	—	—	222061	—	—
Instruction Manual	307878	307878	307878	307880	306523

* Use 3/8 in (9.5 mm) air regulator 109075; must be ordered separately ** Metered grease package includes 233807 Accu-Shot instead of 242056 Pro-Shot † Pump support assembly includes dust cover, base, inductor plate and 6 ft (1.8 m) fluid & air hose

Fire-Ball® Grease Pump Packages

Air-Powered Grease Pumps and Packages

Fire-Ball® 300, 50:1 Packages for 400 lb (180 kg) Containers

	Stationary	Topper-Inductor
Container Size lb (kg)	400 (180)	400 (180)
Package Number	225016*	226013*
Pump Only	239888	239888
Hose & Fitting Kit	222072	204467
Fluid Hose	6 ft (1.8 m) x 1/4 in (6.4 mm)	6 ft (1.8 m) x 1/4 in (6.4 mm)
Air Hose	6 ft (1.8 m) x 3/8 in (9.5 mm)	6 ft (1.8 m) x 3/8 in (9.5 mm)
Follower Plate	223845	—
Cover	200326	—
Carriage	—	204461
Elevator	—	204385
Inductor Plate	—	204353
Base	—	205339
Instruction Manual	307880	306556

* Use 3/8 in (9.5 mm) air regulator 109075; must be ordered separately



400 lb. Stationary Supply Package



120 lb. Stationary Supply with Topper-Inductor



Stationary Supply Package



400 lb. Stationary Supply with Topper-Inductor

Fire-Ball® 425, 10:1 Packages

10:1 Pump for Closed Head Drum for 400 lb (180 kg)

965129	Fire-Ball 425, 10:1 pump complete with bung adapter. For open head drum, remove bung adapter and mount to 200326, 400 lb (180 kg) drum cover. Ideal for transferring grease from 400 lb (180 kg) drum or side pocket of tote tank. Can be modified for stubby horizontal mount on tote tanks. For more information contact Lubrication Equipment Technical Assistance
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Fire-Ball 425, 10:1 Pump Only

205394	Fire-Ball 425, 10:1 pump only, fits 120 lb. Open Drum
205395	Fire-Ball 425, 10:1 pump only, fits 400 lb. Open Drum
965124	Fire-Ball 425, 10:1 pump only, Stubby Universal Mount

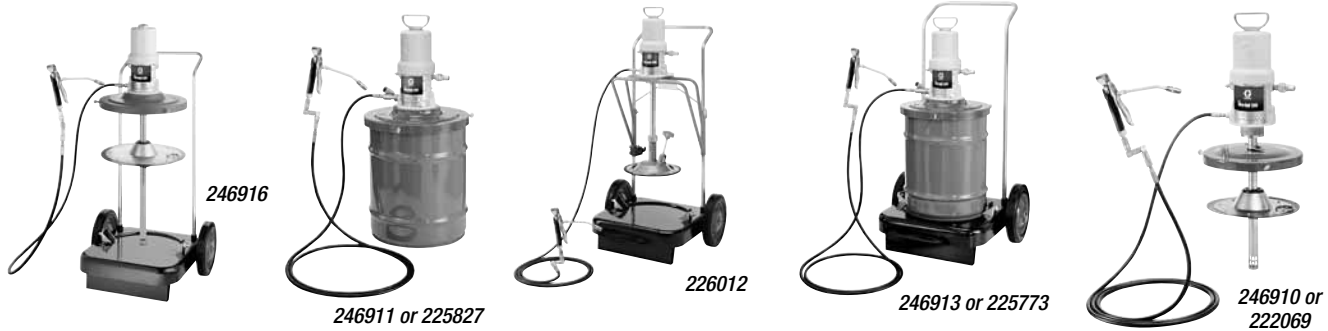
Fire-Ball® 425, 50:1; Bulldog® 3:1 Packages for 120-400 lb (56-180 kg) Containers

Description	Stationary Supply	Stationary Supply	Stationary Supply Topper-Inductor	Ram	Bulldog 3:1 (Sinkers)
Container Size lb (kg)	120 (55)	400 (180)	400 (180)	400 (180)	400 (180)
Package Number	223108*	225781*	226018*	244905	244848
Pump Only	205394	205395	205395	205395	205148
Air Hose Kit	222076	222076	205102	222076	208610
Fluid Hose	6 ft x 3/8 in (1.8 m x 9.5 mm)				
Air Hose	6 ft x 1/2 in (1.8 m x 12.7 mm)				
Cover	204574	200326	—	—	—
Follower Plate	223344	223846	—	—	—
Carriage	—	—	204461	—	—
Elevator	—	—	204385	—	—
Inductor Plate	—	—	205699	—	222404
Base	—	—	205339	—	—
Ram	—	—	—	—	—
Air Regulator	—	—	—	244844	207651
Adapter Plate	—	—	—	162225	—
Adapter Kit	—	—	—	224266	—
Manual	307880	307880	306556	309345	309345

* Use 1/2 in (12.7 mm) air regulator 104266 and gauge 100960; must be ordered separately For Fire-Ball 425, 50:1 Lube Truck Packages, see the Specialty Pump Section

Fire-Ball® Grease Pump Packages

Air-Powered Grease Pumps and Packages



Fire-Ball® 425, 75:1 Packages for 35-400 lb (16-180 kg) Containers

Description	Cover-Mount	Cover-Mount	Inductor	Ram	Pail Length	Bung or Cover
Container Size lb (kg)	120 (55)	400 (180)	400 (180)	400 (180)	35/70 lb (16/32 kg)	400 (180)
Package Number	244635*	244636*	244637*	244906	—	—
Pump Only	239729	239730	239730	239730	239731	239730
Hose and Fitting Kit	222076	222076	205102	222076	—	—
Drum Cover	204574	200326	—	—	204574	—
Follower Plate	223344	223846	—	—	**	—
Carriage	—	—	204461	—	—	—
Elevator	—	—	204385	—	—	—
Base	—	—	205339	—	—	—
Inductor	—	—	205699	—	—	—
Ram	—	—	—	—	—	—
Air Regulator	—	—	—	244844	—	—
Adapter Plate	—	—	—	162225	—	—
Adapter Kit	—	—	—	224266	—	—
Manual	307880	307880	306556	09345	—	—

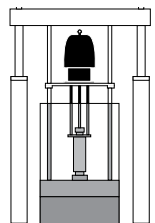
* Use 1/2 in (12.7 mm) air regulator (104266) and gauge (100960); must be ordered separately ** 35 lb: 220653/ 70 lb: 223344 • For Lube Truck Packages, see the Specialty Pumps and Packages Solution Section

RAM Assemblies

Description	Fire-Ball 300, 50:1	Fire-Ball 425, 75:1	Fire-Ball 425, 50:1	Fire-Ball 425, 10:1	Bull Dog, 3:1**
System Package	*	244906	244905	*	244641
Bare Pump	239888	239730	205395	965129	205148
Ram	257435	—	—	—	—
Pump Mount Kit	247336	247337	247337	247337	—
Adapter Kit	224267	224266	224266	not needed	—
Air Regulator and Gauge	203716	244844	244844	207468	207651
Ram Plate Seal Kit	247335	247335	247335	247335	224829
Air Hose 3/4 in x 6 ft	—	—	—	—	208610

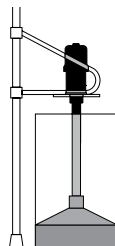
*Order individual components **Drum clamp when required 206537

Drum Systems



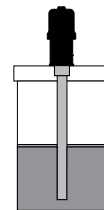
Ram-Mount

- Force feed high volume pumps
- Extreme viscous grease
- Reduce waste
- Clean and convenient method of drum change



Inductor-Mount

- Reduce waste
- Clean and convenient method of drum change



Cover-Mount with Follower Plate

- Economical

Fire-Ball® Grease Pump Accessories

Air-Powered Grease Pumps and Packages

Dispense, Hose and Fitting Kits	
Rated to 4,000-5,000 psi (345 bar) for Portable Fire-Ball 300, 50:1 or Mini Fire-Ball 225, 50:1 Pumps	
222080	For Fire-Ball 300, 15:1. Includes: 15 ft (4.6 m) of 4,000 psi, 3/8 in (9.5 mm) fluid hose (109165), grease dispense valve (242056), Z-Swivel (202577), 3/8 in (9.5 mm) closed nipple (156849), quick-disconnect nipple (169971), quick-disconnect air coupler (110198) and 3/8 in (9.5 mm) air regulator (110234)
222081	For Fire-Ball 300, 15:1. Includes: 25 ft (7.6 m) of 4,000 psi, 3/8 in (9.5 mm) fluid hose (109167), grease dispense valve (242056), Z-Swivel (202577), 3/8 in (9.5 mm) closed nipple (156849), quick-disconnect nipple (169971), quick-disconnect air coupler (110198) and 3/8 in (9.5 mm) air regulator (110234)
236058	For Mini Fire-Ball 225, 50:1. Includes: 12 ft (3.6 m) fluid hose (109151), air coupler (208536), air nipple (169971), grease dispense valve (242056) and Z-Swivel (202577)
222070	For Fire-Ball 300, 50:1. Includes: 12 ft (3.6 m) fluid hose (109151), air coupler (208536), air nipple (169971), grease dispense valve (242056) and Z-Swivel (202577). Instruction manual 307878
222383	For Portable Units Powered by the Mini Fire-Ball 225, 50:1 or Fire-Ball 300, 50:1 Pumps. Includes dispense kit: grease dispense valve (242056), 25 ft (7.6 m) fluid hose (109154), air coupler (208536), air nipple (169971) and Z-Swivel (202577). Instruction manual 307878
Hose and Fitting Kits	
Rated to 5000 psi (345 bar) for Stationary Drum-Mounted Fire-Ball 300, 50:1 Pumps	
222072	Hose and Fittings Kit. Includes: 6 ft (1.8 m) air hose (203320) with swivel elbow (155494) and 6 ft (1.8 m) fluid hose (109150) with swivel elbow (155494). Instruction manual 307880
Rated to 4000 psi (276 bar) for Stationary Drum-Mounted Fire-Ball 425, 50:1 Pumps	
222076	Hose and Fittings Kit. Includes: 6 ft (1.8 m) air hose (205418) with swivel elbow (155470) and 6 ft (1.8 m) fluid hose (109163) with swivel elbow (155494). Instruction manual 307880
Bung Adapters	
239965	For Fire-Ball 425, 50:1 and 75:1 Pumps, 1.65 in ID
239966	For Fire-Ball 300, 15:1 and 50:1 Pumps
Lincoln-to-Graco Adapter Kit	
241246	For Fire-Ball 300, 50:1 when replacing a Series 20 Lincoln
Flange Mounting Accessories for Fire-Ball Pumps	
948393	Flange adapter (male) Fire-Ball 300
948392	Flange adapter (male) Fire-Ball 425
512874	Coupler (female)
Follower Plates	
220653	For 35 lb (16 kg) pails with Mini Fire-Ball 225, 50:1, Fire-Ball 300, 15:1 and 50:1 pumps
220654	For 70 and 120 lb (32/55 kg) drum, Mini Fire-Ball 225, 50:1, Fire-Ball 300, 15:1 and 50:1 pumps
223344	For 120 lb (55 kg) drums with Fire-Ball 425, 50:1 and 75:1 pumps
223700	For 120 lb (55 kg) drums with Dyna-Star 5:1 pumps
223845	For 400 lb (180 kg) drum, Mini Fire-Ball 225, 50:1, Fire-Ball 300, 15:1 and 50:1 pumps, 1.19 in ID
204130	Follower plate same as 223845, but without flexible wiper
223846	For 400 lb (180 kg) drums with Fire-Ball 425, 50:1 and 75:1 pumps, 1-13/32 in ID
205337	Follower plate same as 223846, but without flexible wiper
223701	For 400 lb (180 kg) drums with Dyna-Star 5:1 and Fire-Ball 425, 10:1 pumps, 2.1 in ID
Drum Covers	
200326	Cover for open-head 400 lb (180 kg) drums. Use with any Mini Fire-Ball 225-50:1, Fire-Ball 300-15:1 and 50:1, Fire-Ball 425-10:1 or Dyna-Star 5:1 pump. Use adapter 160754 for bung mounted pumps
204574	Cover for open-head 120 lb (55 kg) or 70 lb (32 kg) drums. Mounts Mini Fire-Ball 225, Fire-Ball grease pumps or Dyna-Star 5:1 pump. Use adapter 160754 for bung mounted pumps
222059	Cover for 35 lb (16 kg) pails. Mounts Mini Fire-Ball 225, 50:1 and Fire-Ball 300, 50:1 pumps using friction-style clutch lock. Allows use of 70 lb (32 kg) length pump with 35 lb (16 kg) pail
160754	Bung-adapter plate. Mounts to standard 400 lb (180 kg) or 120 lb (55 kg) drum cover and converts mounting to standard 2 npt bung opening. Allows use of bung-mounted pumps with drum covers



220653



204574



200326



222059



160754

Fire-Ball® Grease Pump Accessories

Air-Powered Grease Pumps and Packages

Portable Bases

205054	Band Dolly for 35 lb (16 kg) pails
204144	Band Dolly Base for 70 lb (32 kg) or 120 lb (55 kg) drums
203622	Caster Base for 35 lb (16 kg), 70 lb (32 kg) or 120 lb (55 kg) drums

Carts

203650	For 35 lb (16 kg), 70 lb (32 kg) and 120 lb (55 kg) drums. Drums fit onto recess on formed base. Rim clamps secure drum onto cart. Use with pail clamp 159952 when using cart with 35 lb (16 kg) pails
222243	For 120 lb (55 kg) drums with pneumatic wheels for rough terrain
111470	Heavy-duty drum truck for 400 lb (180 kg) drums secures drum onto roll-around base

Drum Elevators

241663	Air-Powered Elevator to speed drum changes. Maximum raised height: 39.5 in (100.33 cm). Includes: Cover Support (207562), Drum Elevator, (204385), Air Control Kit (207561)
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Air Shut-Off Valves, Bleed-type, rated to 250 psi (17.4 bar)

110223	1/4 in (6.4 mm)
110224	3/8 in (9.5 mm)
110225	1/2 in (12.7 mm)
110226	3/4 in (19.1 mm)

High-Pressure Grease Shut-Off Valves

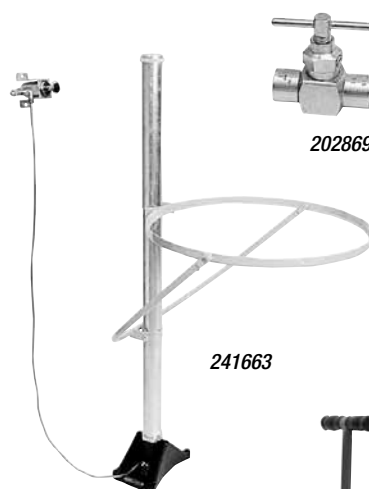
202869	5000 psi (345 bar) high-pressure needle valve, 1/2 npt(f) ported valve for drop-line isolation
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204144



203622



241663



202869



111470



205054

NXT™ Check-Mate® Packages

Air-Powered Grease Pumps and Packages

Ordering Information

Package Number with DataTrak	247973	247976	247974	247977	247975	247978
Package Number without DataTrak	24E006	24E007	24E008	24E009	24E010	24E011
Ratio	14:1	26:1	29:1	55:1	63:1	68:1
Pump with DataTrak	P14MCS	P26MCS	P29MCS	P55MCS	P63MCS	P68MCS
Pump w/o DataTrak	P14DCS	P26DCS	P29DCS	P55DCS	P63DCS	P68DCS
Mounting	Floor Stand (223952)					
3/4 in x 6 ft Air Hose	208610					
1 in x 6 ft Fluid Hose	115042	244657				
System Manual	312863					
Pump Manual	312376					
Pump Lower Manual	312375					
Motor Manual	311238					

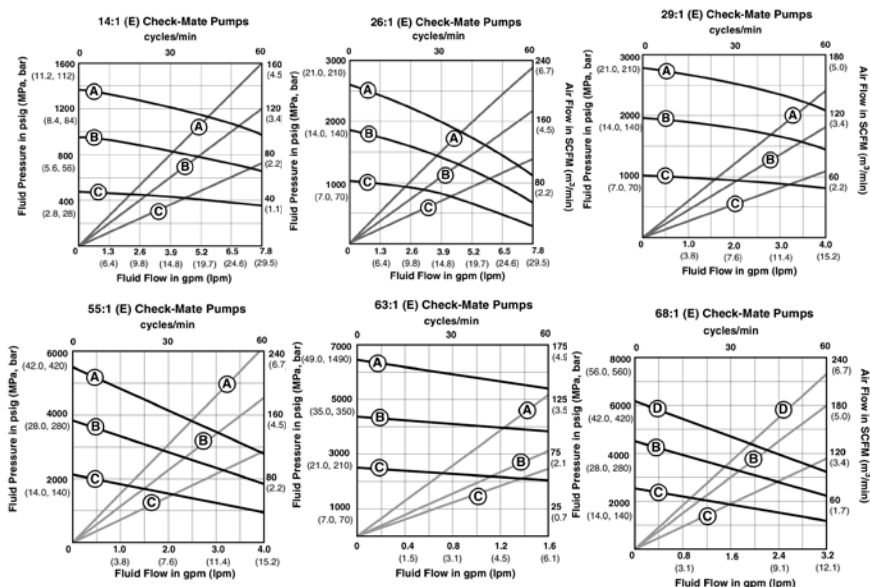
Note: Graco recommends 20 cpm or less for supply applications

Performance Charts

A = 100 psi (7 bar)
B = 70 psi (5.0 bar)

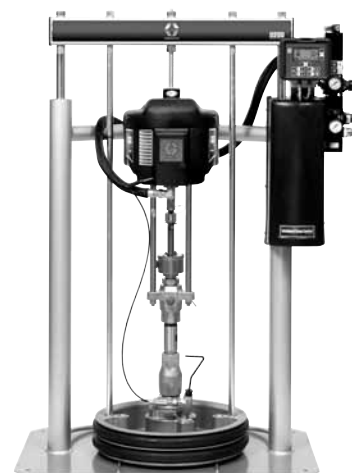
C = 40 psi (2.8 bar)
D = 90 psi (6.3 bar)

Test Fluid : #10 Weight Oil for all pumps



Ordering Information

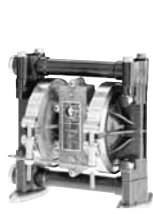
NXT Check-Mate RAM Packages			
Ratio	14:1	63:1	68:1
Package Number	247979	247980	247981
Mounting	RAM System		
Operation Manual	312371		



Air Powered Grease Pumps and Packages

Diaphragm Pumps and Accessories

Air-Operated Double Diaphragm Transfer Pumps



D31255



241906



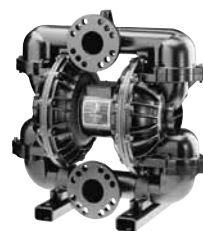
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DB3525



DF3525



DK3525

Ordering Information and Technical Specifications

Key	OT = Oil Transfer	OE = Oil Evacuation	WA = Water, Anti-Freeze	FD = Fuel Dispense (with 50 psi relief valve)	FT = Fuel Transfer	WWS = Windshield Wash Solution					
Body/Diaphragm Description	Part Number	Typical Application	Max. Air SCFM	Air Inlet NPT	Max. psi (bar)	Fluid Inlet/Outlet	Free Flow gpm (lpm)	Air Valve Replacement Kit	Kits (Seats, Balls, Diaphragms)	Diaphragm Kit	Manual
307 3/8 in Diaphragm Pump Acetal/TPE	D31255	OT, WA, WWS	7 ⁽¹⁾	1/4	100 (7)	3/8	7 (31.8)	239952	D03255	D03005	308553
515 3/4 in Diaphragm Pump Aluminum/Buna N	243669	OT, OE, WA, WWS	28 ⁽¹⁾	1/4	100 (7)	3/4	16 (60.6)	241657	D05277	D05007	308573
716 3/4 in Diaphragm Pump Acetal/Buna Dual Inlet	241906	50/50 WWS, WA	28 ⁽¹⁾	1/4	100 (7)	3/4	16 (61)	241657	D05277	D05007	308573
1 in Diaphragm Pumps 1050A Aluminum/TPE (UL)	647016	OE, WA, FT (leaded fuel only)	67	1/2	120 (8.2)	1	50 (189)	24B766	24B634 and 24B639	24B624	313597
1050A Aluminum/TPE (UL)	647648	FD	20 ⁽²⁾	1/2	50 (3.4)	1	32 (121)				313597
1050A Aluminum/TPE	647666	OT, OE, WA	67 ⁽²⁾	1/2	125 (8.6)	1	50 (189)				312877
1590 1-1/2 in Diaphragm Pump Aluminum/TPE	DB3525	OT, OE, WA	90 ⁽³⁾	1/2	120 (8.3)	1 1/2	90 (341)	236273	D0B525	D0B005	308441
2150 2 in Diaphragm Pump Aluminum/TPE	DF3525	OT, OE, WA	175 ⁽³⁾	1/2	120 (8.3)	2	150 (567)	236273	D0F525	D0F005	308368
3275 3 in Diaphragm Pump Aluminum/TPE	DK3525	OT, OE, WA	325 ⁽³⁾	3/4	120 (8.3)	3	275 (1,041)	238765	D0K525	D0K005	308639

NOTE: All pumps are 1:1 ratio ⁽¹⁾ Max air use at 100 psi (7.0 bar) ⁽²⁾ Max air use at 125 psi (8.6 bar) ⁽³⁾ Max air use at 120 psi (7.0 bar)

Mounting Accessories

Pump	307	515/716	1050	1590	2150	3275
Air Line Filter	110146		106148	106149	106150	106150
Air Regulator & Gauge	110147	110147	244844	202858	206199	207651
Air Quick-Connect Coupler	208536, 1/4 npt(f)		110199, 1/2 npt(f)			N/A
Air Quick-Connect Nipple	169970, 1/4 npt(m)		110196, 1/2 npt(f)			N/A
Bleed Type Air Valve	110223		110224	110225		110226
Wall Bracket	224835		246637	N/A	N/A	N/A
Thermal Relief Kit	238899	238428		N/A	N/A	N/A
Thermal Relief Valves 150 psi (10.3 bar)	113497 al/bn, 112119 ss/tf		113497 al/bn , 112119 ss/tf			
Grounding Wire and Clamp	222011					
Suction Hose Kit	236054			N/A	N/A	N/A
Flange Adapter Kit	N/A	N/A	N/A	N/A	N/A	N/A
Dual Inlet Manifold	N/A	*	685984 **	N/A	N/A	N/A
Instruction Manual	308553	308573 & 308981	308326 & 308479	308441	308368	308639

*243669 comes with dual inlet **Dual inlet must be ordered separately for 685984

Fast-Flo® 1:1

Transfer Pumps and Accessories

Features and Benefits

- Differential air motor for smooth operation and reliability
- Stainless steel models available for corrosion resistance

Typical Applications

- Low pressure, high volume transfer of low viscosity fluids
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Water
- Anti-freeze
- Windshield wash fluid
- Used oil
- Used anti-freeze

NOTE: Use Fast-Ball 1:1 for petroleum-based products.

Technical Specifications

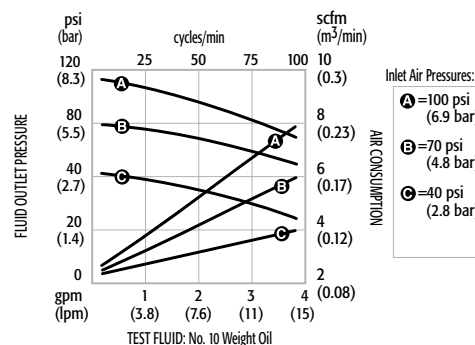
Flow Rate gpm (lpm)	5 (19)
Maximum Fluid Pressure psi (bar)	180 (12.4)
Operating Range ⁽¹⁾ psi (bar)	40-180 (2.8-12)
Wetted Materials	See Ordering Info
Air Inlet Size	1/4 npt(f)
Material Inlet ⁽²⁾	1-1/2 npt(f)
Material Outlet	3/4 npt(f)
Line Length ‡	Up to 100 ft (30 m)
Dispense Points	1
Annual Usage	Up to 5000 gal (18921 l)

⁽¹⁾ Max Operating Air Pressure for 226951 is 60 psi (4.2 bar)

⁽²⁾ For universal pumps

‡ Consult your local authorized Graco representative for line or pipe sizing

Pump Performance



226948



226947

Fast-Flo® 1:1

Transfer Pumps and Accessories

Ordering Information

Universal-Length Pumps (includes motor and pump-lower assembly)								
Part Number	226948	226952	237130	237131	237132	226943 *	226944 **	226945 **
Material	CS	SST	CS	CS	SST	CS	CS	SST
Std. Seal Repair Kits	218112	218112	213012	213013	213013	213012	215964	215964
Material	Rubber	Rubber	Leather	PTFE	PTFE	Leather	Polyethylene	Polyethylene
Typical Fluids	Motor Oil						Anti-Freeze, Windshield Wash	

Note: All seal repair kits are interchangeable with other Fast-Flo pumps.

Drum-Length Pumps (includes motor and pump-lower assembly)									
Part Number	226947	226951 †	226953	237133	237134	237129	226940	226941	226942
Wetted Parts	CS	CS	SST	CS	CS	SST	CS	CS	SST
Std. Seal Repair Kits	218112			213012	213013		213012	215964	
Material	Rubber			Leather	PTFE		Leather, PTFE, Leather	Polyethylene, UHMWPE	
Typical Fluids	Motor Oil								A/W

Note: All seal repair kits are interchangeable with other Fast-Flo pumps.

* UL-listed

** UL-listed and CE-marked

† Adjustable down tube length between 18 in (457 mm) to 46.4 in (1180 mm)

Accessories

Motor Service Kits for all Fast-Flo 1:1 Pumps	
220168	Motor Service Kits for all Fast-Flo 1:1 Air Valve Piston Assembly (used with repair kit 214584, which must be ordered separately)
Hose and Fittings Kits	
222118	18 in (0.5 m) for connecting wall-mounted Fast-Flo 1:1 pumps to piping. Includes: air hose (109123) with swivel elbow (155541), fluid hose (109108) with swivel elbow (160327)
222119	6 ft (1.8 m) for use with drum-mounted Fast-Flo 1:1 pumps. Includes: air hose (109125) with swivel elbow (155541), fluid hose (109105) with swivel elbow (160327)
Bung Adapters	
214583	Allows direct mounting of full-length Fast-Flo 1:1 pumps into standard 2 npt drum bung
217359	Sealed bung adapter for Fast-Flo pumps; can be used with suction kit 236054
Installation Kits	
218316	Includes shut-off valve, regulators, gauges and fittings as necessary for normal installation

Hurricane™

Electrical Powered Pumps and Packages

Features and Benefits

- Electric pump with 6 ft (1.8 m) grounded power cord
- Digital metering standard on all units
- Quick-change bung adapter
- Pumps synthetic- or petroleum-based oils, ATF and antifreeze (up to 50/50 mix)
- Simple two button operation
- Fits any container up to 44 in (1.1 m) tall with a 2 in =NPT opening
- Measures in quarts, gallons, pints or liters
- Available with 8 ft or 25 ft (2.4 m or 7.6 m) meter and hose or built-in tapper
- Variety of portable package options

Typical Fluids Handled

- Synthetic- and petroleum-based oils
- Automatic transmission fluid
- Anti-freeze (50/50 mix)

Technical Specifications

Voltage.....	110 Volts / 60 Hz
Maximum current.....	6 Amps
Flow rate.....	1.50 gpm (6.0 lpm)
Maximum container height.....	44 in (1.1 m)
Weight (varies by model).....	Up to 20 lbs (9 kg)
Meter accuracy.....	± 1.5%
Instruction manual.....	311216

Note: ETL listed in US and Canada

Ordering Information

Hurricane Dispense Systems	
248918	Hurricane metered tapper unit
234902	Hurricane 8 ft (2.4 m) hose and meter
249294	Hurricane 25 ft (7.6 m) hose and meter
Portable Packages with 25 Gallon Dispense Cart	
249783	Hurricane metered tapper unit
249771	Hurricane 8 ft (2.4 m) hose and meter
249821	Hurricane 25 ft (7.6 m) hose and meter
Portable Packages for 16 Gallon (60 l) Barrels	
253487	Hurricane caster base with metered tapper
253486	Hurricane caster base with 8 ft (2.4 m) hose and meter
253494	Hurricane caster base with 25 ft (7.6 m) hose and meter
Accessories	
253683	Hurricane caster base



234902 and 249294
Hurricane
with meter
& hose



249771 and 249821
Portable package
with 25 gallon
dispense cart



253486 and 253494
Portable package
16 gallon barrel
not included



248918
Hurricane
tapper
unit



234902 and 249294
Hurricane with
meter & hose

APEX™ and APEX On-Demand

Electrical Powered Pumps and Packages

APEX Transfer Pumps

- Available with 12 VDC, 115 VAC and 230 VAC electric motors
- Self-priming, positive displacement design
- Pumps petroleum- and synthetic-based lubricants up to 8 gpm (30 lpm)
- Built-in bypass valve
- Transfer used oil with inlet suction screen (260306)
- TENV electric motor for demanding environments, models 260105, 260106, 260108 and 260109
- System includes suction tube, fluid hose, dispense valve and bung adapter for models 260100, 260101, 260102 and 260104



APEX 115 VAC oil transfer system

APEX On-Demand Dispensing Pumps

- On-demand sensing system automatically starts and stops the pump
- Low operating and installation costs
- Available in 12 VDC and 115 VAC
- TENV electric motor for demanding environments
- Extremely quiet pump operation
- Output flow is continuous and non-pulsating
- Inlet and outlet check valves with thermal relief valves included



APEX On-Demand
12 volt DC dispensing pump

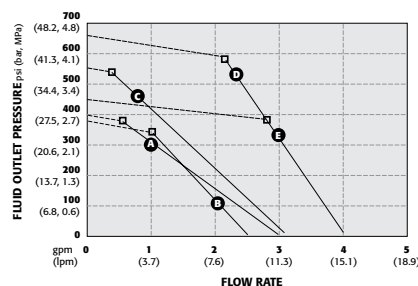
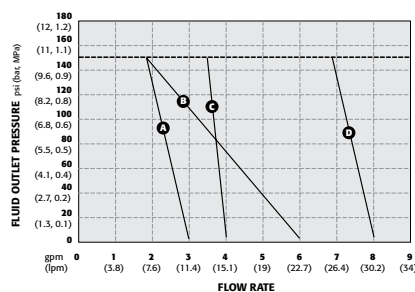
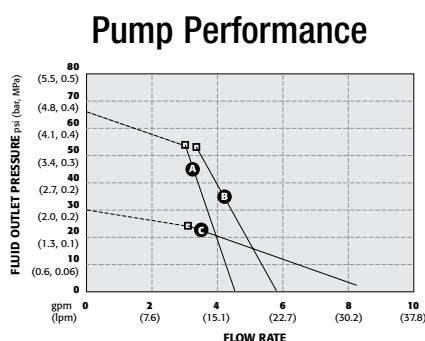
Typical Applications

- Filling bulk tanks from drums
- Agricultural equipment
- Lubricant transfer from remote locations
- Filling in-plant machinery
- Construction equipment
- Evacuating used oil receivers
- Automotive and truck service garages
- Fleet marine and personal boat service

Typical Fluids Handled

- Synthetic oil
- Petroleum oil*
- Used oil*
- Anti-freeze
- Hydraulic fluids
- Cutting oils
- Liquid soap
- Non-flammable oil based solvents
- Oil-based herbicide carriers

*Not for food grade use



APEX™ and APEX On-Demand Transfer Pumps and Packages

APEX Transfer System

Part Number	260100	260101	260102*	260104
Motor	12 VDC	115 VAC	115 VAC	230 VAC
Hertz	NA	60 Hz		50/60 Hz
Horsepower	0.75	0.50	0.75	0.50
Maximum Current	35 amps	9.2 amps	9.0 amps	3.9 amps
Maximum Flow Rate	5.8 gpm (22 lpm)	4.25 gpm (16 lpm)	8.0 gpm (30 lpm)	4.25 gpm (16 lpm)
Maximum Pressure	65 psi (4.5 bar)		30 psi (2.1 bar)	65 psi (4.5 bar)
Inlet Port	1 npt(f)			
Outlet Port	3/4 npt(f)			
Weight	34 lbs (15 kg)	25 lbs (11 kg)		
Instruction manual	311305			

Note: All oil transfer systems come with 3/4 in x 8 ft hose, 1 in x 3/4 in suction tube & 3/4 in outlet dispense valve
**Designed for fluid viscosities of 1000 centistokes or less. If fluid viscosity is greater than 1000 centistokes use part 260101.*

APEX Transfer Pumps

Part Number	260105*	260106	260108	260109
Motor	115 VAC			
Hertz	60 Hz			
Horsepower	1.00			
Maximum Current	7.5 amps	9.0 amps	11.0 amps	
Maximum Flow Rate	3.0 gpm (11 lpm)	4.0 gpm (15 lpm)	8.0 gpm (30 lpm)	
Maximum Pressure	150 psi (10 bar)			
Inlet Port	1 npt			
Outlet Port	3/4 npt			
Weight	25 lb (11 kg)			30 lb (14 kg)
Instruction Manual	311306			

Note: All oil transfer pumps come with bung adapter.
**Part no. 260105 is a wall mount unit*

APEX On-Demand Pumps

Part Number	260110	260111	260113	260114	260112
Voltage	115 VAC				12 VDC
Hertz	60 Hz				N/A
Horsepower	0.75	1.00	1.50	2.00	0.75
Maximum Current	10 amps	13 amps	18 amps	21 amps	75 amps
Maximum Flow Rate	2.3 gpm (9 lpm)	3 gpm (11 lpm)	4.0 gpm (15 lpm)		3 gpm (11 lpm)
Maximum Pressure	370 psi (25 bar)	550 psi (38 bar)	470 psi (32 bar)	650 psi (45 bar)	400 psi (28 bar)
Inlet Port	3/4 npt				
Outlet Port	-12 JIC (m)				
Weight	27 lb (12 kg)	32 lb (15 kg)	41 lb (19 kg)	52 lb (24 kg)	27 lb (12 kg)
Instruction Manual	311307				

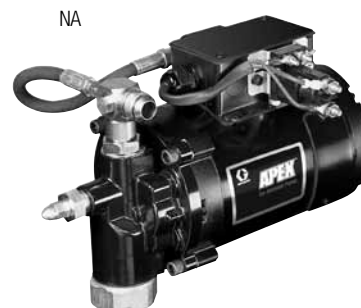
Note: All on-demand pumps come with bung adapter

Accessories

260145	Wall Mounting Bracket, fits all models
260238	"Y" Strainer with 3/4" npt female in-line strainer for used oil transfer
260306	Inlet Suction Screen Assembly, required for used oil applications, 20 mesh screen
260124	55 in (1.3 m) PVC Suction Tube With inlet check valve



APEX 115 VAC oil transfer system



APEX On-Demand
12 volt DC dispensing pump

GTP10 and GTP12

Transfer Pumps and Packages

Features and Benefits

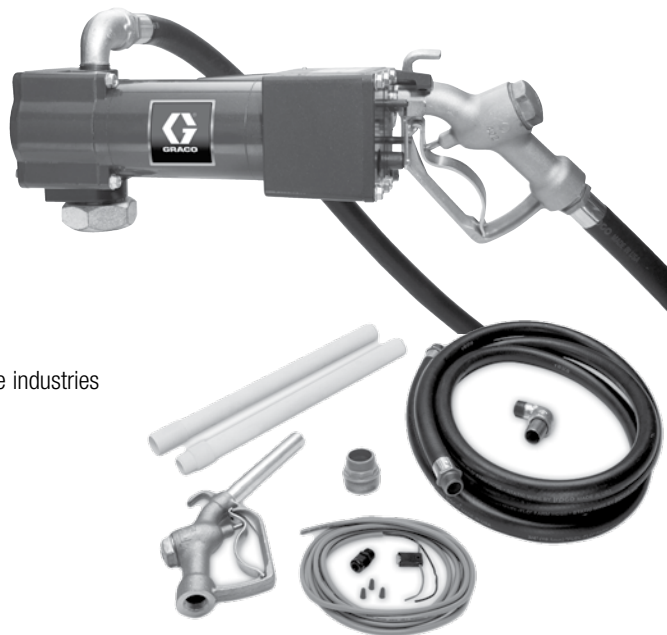
- Heavy-duty, die-cast aluminum
- CSA listed motor
- Built-in relief valve and filter strainer
- Easy-to-lock security
- High quality, UV resistant automotive finish
- Rain proof for extreme weather conditions
- Two year warranty

Typical Applications

- Fuel transfer for the construction, agriculture, manufacturing and marine industries

Typical Fluids Handled

- Gasoline
- Diesel fuel
- Kerosene
- Bio-fuels



Ordering Information

Kit Number	260000	260020	260025	260022
Voltage	12 VDC	24 VDC	115 VAC	230 VAC
Inlet Port	1 npt			
Outlet Port	3/4 npt			
Current	12 amps	6 amps	1.7 amps	1 amps
Power Cord	18 ft (5.5 m)		N/A	
Hose	3/4 in x 12 ft (19 mm x 3.7 m)			
Suction Tube	1 in x 34 in (25 mm x 0.9 m)			
Weight	20 lbs (9 kg)			
Max Fluid Flow	10 gpm (38 lpm)		12 gpm (45 lpm)	
Instruction Manual	311304			

Fuel Transfer Kit: Includes pump, fuel nozzle, bung adapter, 34 in (0.9 m) suction tube, 12 ft (3.7 m) grounded hose, elbow fitting, 18 ft (5.5 m) power cable, wire nuts and strain relief

NOTE: AC units do not include power cable, wire nuts or strain relief

Accessories

260078	Unleaded nozzle
260083	Unleaded nozzle with auto shut-off
260082	Regular/diesel nozzle with auto shut-off
260079	Regular/diesel nozzle
260523	8 ft x 3/4 in (2.4 m) npt UL Listed hose
260521	12 ft x 3/4 in (3.7 m) npt UL Listed hose



260083

Diesel Exhaust Fluid (DEF) Dispense Systems

Specialty Pumps and Packages

Features and Benefits

All packages come with quick changeover inlet kit, air controls, air-operated double diaphragm pump, inlet hose, dispense hose and manual or auto shut-off nozzle. Simple bolt together assembly with no special tools.

Typical Applications

- Automotive and heavy-duty dealerships
- Mining
- Service and fast lube centers
- Fleet service facilities
- In-plant
- Lube trucks

Typical Fluids Handled

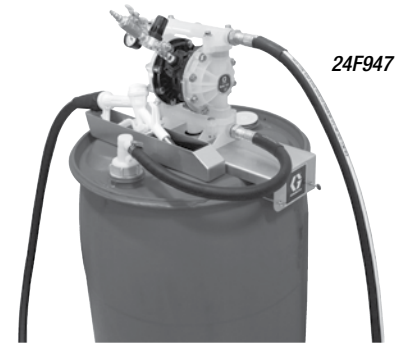
- Diesel Exhaust Fluid

Ordering Information

Tote/Wall DEF Package with Meter	
24F531	Package includes: Air-Operated Diaphragm pump (24G745), Tote/Wall mounting bracket with nozzle holder (24F870), Automatic shut off SST nozzle with swivel (24F529), DEF meter package for auto nozzle (24H293), Quick connect inlet kit (24F532), DEF Inlet hose—6 ft, 3/4 in BSPP (M) (124581), DEF Dispense hose, 20 ft, 3/4 in BSPP, MBE (124603), Air Controls: Regulator (110147), vent (110223), 50 psi valve (124963)
Tote/Wall DEF Package without Meter	
24F878	Package includes: Air-Operated Diaphragm pump (24G745), Tote/Wall mounting bracket with nozzle holder (24F870), Automatic shut off SST nozzle with swivel (24F529), Quick connect inlet kit (24F532), DEF Inlet hose—6 ft, 3/4 in BSPP (M) (124581), DEF Dispense hose, 20 ft, 3/4 in BSPP, MBE (124603), Air Controls: Regulator (110147), vent (110223), 50 psi valve (124963)
Drum DEF Package without Meter	
24F947	Air-Operated Diaphragm pump (24G745), Drum mounting bracket with nozzle holder (24F679), Manual nozzle (125078), Quick connect inlet kit (24F532), DEF Inlet hose—2 ft, 3/4 in BSPP X cut (124875), DEF Dispense hose—12 ft, 3/4 in BSPP M x cut end (125079), Air Controls: Regulator (110147), vent (110223), 50 psi valve(124963)
Pumps	
24G745	Air-Operated Diaphragm pump (15 gpm free flow, polypropylene—3/4 in BSPP (F)
24G636	Pump, hand, DEF compatible
Reels	
HSDD5A	DEF XD-30 hose reel, 3/4 x 50, white (see XD hose reel section for dimension details)
HSDD5B	DEF XD-30 hose reel, 3/4 x 50, blue (see XD hose reel section for dimension details)
HSDD5F	DEF XD-30 hose reel, 3/4 x 50, yellow (see XD hose reel section for dimension details)
HSDDDA	DEF XD-30 hose reel, bare, white (see XD hose reel section for dimension details)
HSDDDB	DEF XD-30 hose reel, bare, blue (see XD hose reel section for dimension details)
HSDDDF	DEF XD-30 hose reel, bare, yellow (see XD hose reel section for dimension details)



24F531



24F947



24G745



24G636



HSDD5B

Diesel Exhaust Fluid (DEF)

Diesel Exhaust Fluid (DEF)

Specialty Pumps and Packages

Hoses	
124875	DEF hose, 2 ft, 3/4 in BSPP(M) x cut end (inlet hose)
124581	DEF hose, 6 ft, 3/4 in BSPP(M) x cut end (inlet hose)
125478	DEF hose, 4 ft, 3/4 in BSPP cut both ends (for hand pump only)
125079	DEF hose, 12 ft, 3/4 in BSPP(M) x cut end
124671	DEF hose, 12 ft, 3/4 in BSPP (mbe)
124603	DEF hose, 20 ft, 3/4 in BSPP (mbe)
125074	DEF hose, 20 ft, 3/4 in BSPP(M) x cut end
125242	DEF hose, 50 ft, 3/4 BSPP X 3/4 BSPP
Mounting	
24F870	Tote/Wall mounting bracket with nozzle holder
24F679	Drum mounting bracket with nozzle holder
124541	Holder, nozzle bath
Meter Kits	
24G738	Meter only, 1/2 in BSPP(F/F)
24H293	Meter Kit with fittings for SST auto nozzle
Nozzles	
124398	Automatic shut off SST nozzle without swivel—3/4 in BSPP(F)
24F529	Automatic shut off SST nozzle with swivel—3/4 in BSPP(F)
125078	Manual nozzle
24F524	SST Swivel, 3/4BSPP (M) x 3/4 BSPP(F)
Inlet Kits and Accessories	
24F532	Quick connect inlet kit: Includes: 24F532 drum coupler, 124549 drum insert and 124550 down tube
124548	Drum coupler
124549	Drum insert with NPS thread
125014	Drum insert with buttress thread
124550	Down tube
124963	50 psi air safety valve
125479	Suction tube (DEF hand pump)



124671



24F870



24F679



24H293



24F529



24F532

Fire-Ball® Lube Truck Oil and Grease Packages

Specialty Pumps and Packages

Oil Package Selection and Ordering Information

	Fire-Ball 300 Cover-Mounted Package	Fire-Ball 300 Cover-Mounted Package	Fire-Ball 300 Bung-Mounted Package	Fire-Ball 425 Cover-Mounted Package	Fire-Ball 425 Bung-Mounted Package
Ratio	5:1			10:1	
Container Size	16 gal (60 l) Open-head	55 gal (200 l) Closed-head*			55 gal (200 l) Closed-head*
Package Number	222086	206655	204264	206656	222067
Pump Only	203872	203857	204254	222065	222095
Hose/Fitting Kit	222063			222066	
Hose Length	6 ft (1.8 m)	6 ft (1.8 m)	6 ft (1.8 m)	6 ft (1.8 m)	6 ft (1.8 m)
Air Regulator	(1)	(1)	(1)	(2)	(2)
Hold-Down Kit	222061	207361			
Drum Cover	222060	207367	-	207367 ⁽³⁾	-
Bung Adapter	-	-	204076 (2.140 in Dia.)	-	224579 (2.159 in Dia.)
Pump Clamp	-	-	204095	-	204095
Instruction Manual	307883				

* For closed-head drums, pump mounts off-center on drum cover. Pump draws through standard 2 npt bung opening and is equipped with grommet for rain-tight seal to the drum cover.

⁽¹⁾ Order 3/8 in (9.5 mm) air regulator and gauge separately, (109075).

⁽²⁾ Order 1/2 in (12.7 mm) air regulator (104266) and gauge (100960) separately.

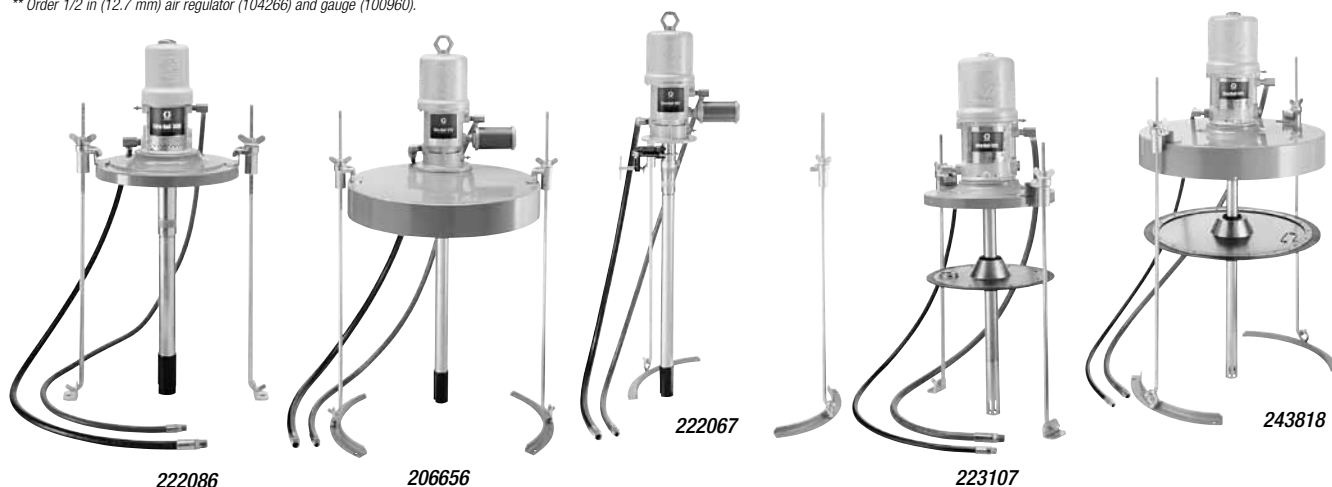
⁽³⁾ Off set drum cover

Grease Package Selection and Ordering Information

	Fire-Ball 300 Cover-Mounted Package	Fire-Ball 300 Cover-Mounted Package	Fire-Ball 425 Cover-Mounted Package	Fire-Ball 425 Cover-Mounted Package	Fire-Ball 425 Cover-Mounted Package	Fire-Ball 425 Cover-Mounted Package
Ratio	50:1				75:1	
Container Size	120 lb (55 kg) Open-head	400 lb (180kg) Open-head	120 lb (55 kg) Open-head	400 lb (180 kg) Open-head	120 lb (55 kg) Open-head	400 lb (180 kg) Open-head
Package Number	222085	222071	223107	222075	243817	243818
Pump Only	239887	239888	205394	205395	239729	239730
Hose/Fitting Kit	222072		222076			
Hose Length	6 ft (1.8 m)					
Air Regulator	*		**			*
Hold-Down Kit	222061	207361	222061	207361	222061	207361
Drum Cover	222060	207366	222060	207366	222060	207366
Follower Plate	220654	223845	223344	223846	223344	223846
Instruction Manual	307880					

* Order 3/8 in (9.5 mm) air regulator and gauge separately, (109075).

** Order 1/2 in (12.7 mm) air regulator (104266) and gauge (100960).



Fire-Ball® 300, 15:1 Undercoating/Rust-Proofing Packages

Specialty Pumps and Packages

Features and Benefits

- Available in carbon steel for petroleum-based or SST for water-based materials
- Durable air motor provides trouble-free operation

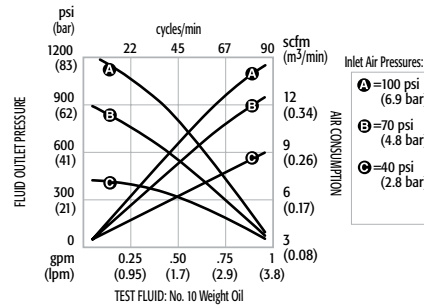
Typical Applications

- Undercoating, rust-proofing and sound-deadening materials
- Automotive and heavy-duty vehicle dealerships
- Fast lube centers and service shops
- Fleet service facilities

Typical Fluids Handled

- Undercoating and rust-proofing
(verify chemical compatibility for pump's wetted components with undercoating material supplier or contact Graco directly at 1-800-533-9655)

Pump Performance



Technical Specifications

Maximum Fluid Pressure.....	2700 psi (186 bar)
Effective Air Motor Diameter	3 in (76.2 mm)
Operating Range.....	40-180 psi (2.8-12.5 bar)
Continuous-Duty Flow Rate.....	0.7 gpm (2.7 lpm)
Approx. Air Consumption @ 100 psi (7 bar)	17 cfm
Air Inlet	3/8 npt(f)
Material Outlet.....	1/4 npt(f)
Material Inlet for Non-SST Pump	1 npt (straight inlet)
Material Inlet for 224825 (SST Pump)	1 npt (barbed inlet)
Wetted Parts for Non-SST Pump	CS, Aluminum, PTFE, Rubber
Wetted Parts for SST pump	SST, Aluminum, Leather, PTFE, Rubber
Instruction Manual for non-SST Pump	306531
Instruction Manual for SST Pump	308069

Ordering Information

	Undercoating			Spray Masking
Style	Portable	Portable Dolly-Mounted	Stationary	Bung-Mounted Stationary
Container Size	35 lb (16 kg)	120 lb (54 kg)	400 lb (180 kg)	400 lb (180 kg)
Package Number	222077	226342	226269	224826*
Pump Only	206405	206699	206700	224825 (SST pump)
Dispense Kit	222079	222079	222082	224023
Tip	286517			286211 / 286621
Hose Length	15 ft (4.6 m)	15 ft (4.6 m)	25 ft (7.6 m)	25 ft (7.6 m)
Cover	222058	204574	200326	-
Caster Base	-	204144	-	-
Instruction Manual	307879/306531			308069

* Package 224826 includes flexible short tube (224022) long enough for 400 lb (180 kg) container, but can be trimmed to accommodate smaller containers.

214570	60-mesh Aluminum filter (3/8 npt(f) inlet; 1/4 npt(f) outlet). Max. working pressure: 3000 psi (210 bar)
--------	--

Replacement Screen Elements (SST) 3-pack/25-pack

224458/238436 30-mesh | **224459/238438** 60-mesh | **224468/238440** 100-mesh

202577	Z-Swivel allows non-binding movement for hard-to-reach spots. Order 155570 adapter separately to accommodate 234237 gun
206496	Nozzle Extension delivers 360° coating fan into blind areas. Length 30-3/4 in (99 cm) x 7/8-14(f) end. Tip 206502, size .043
234237	4 Finger Silver Gun with tip guard 243161 and tip 286517. 4,500 psi (310 bar) x 3/8 npt(f) inlet. Must order 155570 adapter and 239663 straight swivel to accommodate gun to 1/4" (mbe) hose
239966	Bung Adapter

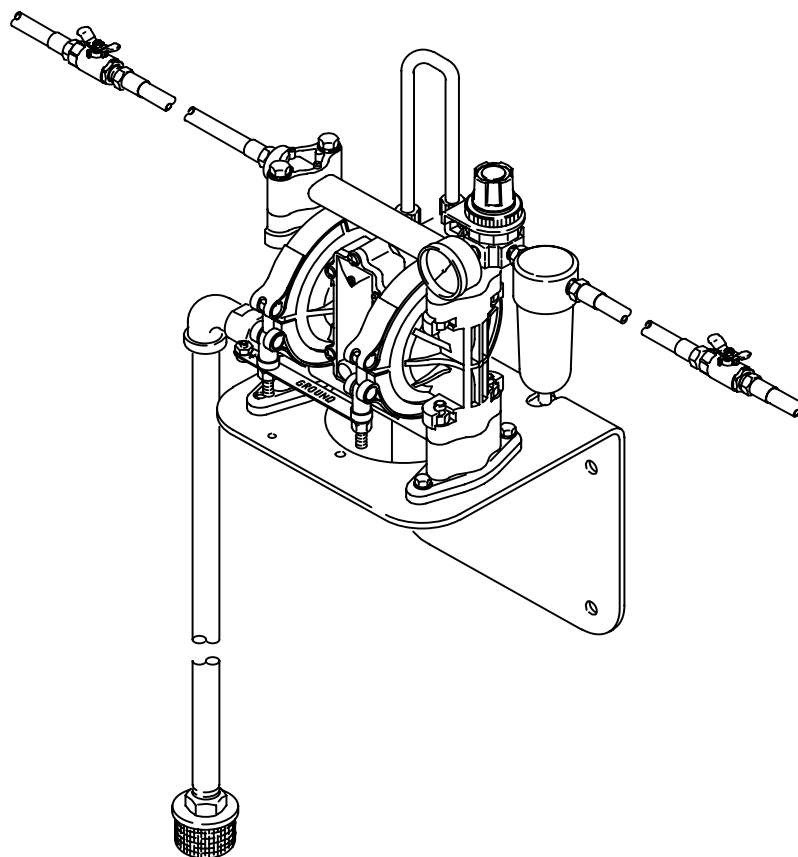


Windshield Wash and Coolant Dispense

Specialty Pumps and Packages

Packages for Pre-Mixed Windshield Wash Solvent and Coolant Dispense

307 Air-Operated Double-Diaphragm Pump	
237161	Complete package includes the following: 307 Diaphragm Pump (D31255), 6 ft (1.8 m) air hose (109125), 4 ft (1.2 m) coupled nitrile fluid hose (220596), air filter (110146), air gauge (108190), air line fitting (111511), 1/4 npt air regulator (110318), elbow (100611), 15 in (381 mm) 3/8 in ID tube, (187479), mounting bracket (190125), adapter (156022), 1/4-18 npt nipple (156971), suction hose kit (223888), 6 ft (1.8 m) coupled PVC hose and 304 SST 16 mesh strainer, wall bracket (224835)
237160	Includes all items listed above except diaphragm pump and wall bracket



Bulk Anti-Freeze and Windshield Solvent Transfer Packages

Description	1050 AODD	1050 AODD	716 AODD	716 AODD
	Dual Inlet	Single Inlet	Dual Inlet	Single Inlet
Package Number	244679	244680	244681	244682
Pump	647016	647016	243669	241906
Air Regulator	109075	109075	110147	110147
Fluid Connect Hose	115042	115042	109105	109105
Air Connect Hose	205418	205418	109125	109125
Air Shut-off Valve	110224	110224	110223	110223
Wall Mount Bracket	24C637	24C637	224835	224835
Dual Inlet Manifold	685984	—	—	—
Suction Kit	2-236054	236054	2-236054	236054
Thermal Relief Kit	238428	238428	113497	113497
Instruction Manual	309353	309353	309353	309353

Dyna-Star® and Power-Star™ Pumps

Hydraulic Powered Pumps and Packages

Features and Benefits

- Ties into existing hydraulic systems on mobile equipment
- Operates quieter than air driven pumps and doesn't require mufflers
- Eliminates the need for air compressors
- Provides self-lubrication for long life and reliability
- Hydraulic changeover is faster with less pulsation allowing smoother output pressure, even with long plumbing runs

Typical Applications

- Low pressure, high volume oil transfer
- High pressure, high volume grease dispense
- Heavy-duty dealerships
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils
- Grease up to NLGI #2

Ordering Information for Oil Packages

Oil Applications	Power-Star, 1:1	Dyna-Star®, 1:1	Dyna-Star, 1:1	Dyna-Star, 1/4:1	Stainless Steel Dyna-Star, 1:1
Drum Size	Universal	Universal	55 gal (200 l) Bung- or Cover- Mounted	Universal	Universal
Pump Number	236754	224741	224742	236753	237653
Max. Input Pressure	1500 psi (102 bar)	1500 psi (102 bar)	1500 psi (102 bar)	1500 psi (102 bar)	1000 psi (70 bar)
Max. Fluid Input Volume	12 gpm (45.4 lpm)	3 gpm (11.4 lpm)	3 gpm (11.4 lpm)	3 gpm (11.4 lpm)	3 gpm (11.4 lpm)
Max. Output Flow Rate	12 gpm (45.4 lpm)	3 gpm (11.4 lpm)	3 gpm (11.4 lpm)	10 gpm (37.9 lpm)	3 gpm (11.4 lpm)
Maximum CPM	60	60	60	60	60
Max. Fluid Output Pressure	1500 psi (102 bar)	1500 psi (102 bar)	1500 psi (102 bar)	375 psi (25.1 bar)	1500 psi (102 bar)
Hydraulic Supply Inlet	3/4 npt	3/8 npt	3/8 npt	3/8 npt	3/8 npt(f)
Hydraulic Return Outlet	1-1/4 npt	3/4 npt	3/4 npt	3/4 npt	3/4 npt(f)
Fluid Outlet	1/2 npt	1/2 npt	1/2 npt	1/2 npt	1/2 npt(f)
Fluid Inlet	1-1/2 npt	1-1/2 npt	1-1/2 npt	1-1/2 npt	1-1/2 npt
Max. Incoming Fluid Temp.	130° F (54° C)	130° F (54° C)	130° F (54° C)	130° F (54° C)	130° F (54° C)
Instruction Manual	308391	308155	308155	308390	308155
Applications	Bulk oil transfer	Oil dispensing	Oil dispensing	Bulk oil transfer	Anti-freeze dispensing



Dyna-Star® and Viscount® II Pumps

Hydraulic Powered Pumps and Packages

Ordering Information for Grease Packages

Grease Applications	Dyna-Star, 5:1	Dyna-Star, 10:1	Viscount II, 2.4:1
Part No. – Drum Size	224912 – 35 lb (16 kg) 224751 – 120 lb (55 kg) 224752 – 400 lb (180 kg)	247540 – 60 lb (27 kg) 247443 – 120 lb (55 kg) 247450 – 400 lb (180 kg)	222902 – 400 lb (180 kg)
Max. Input Pressure	1500 psi (102 bar)	600 psi (41 bar)	1500 psi (102 bar)
Max. Hydraulic Fluid Input Vol.	3 gpm (11.4 lpm)	3 gpm (11.4 lpm)	12 gpm (45.4 lpm)
Max Grease Flow Output Rate	4 lb/min (1.8 kg)	1.1 lb/min (0.5 kg)	54 lb/min (20.4 kg)
Maximum CPM	60	60	60
Max. Fluid Output Pressure	7,500 psi (517 bar)	7,500 psi (517 bar)	2,300 psi (159 bar)
Hydraulic Supply Inlet	3/8 npt	3/4-16 in. JIC (37° Flare)	3/4 npt
Hydraulic Return Outlet	3/4 npt	3/4 npt	1 npt
Fluid Outlet	1/2 npt	1/2 npt	1-1/2 npt
Maximum Incoming Hydraulic Fluid Temp.	130° F (54° C)	200° F (93° C)	130° F (54° C)
Instruction Manual	308156	312350	308149

Hydraulic Fluid Controls (Required for each pump)

236864	Dyna-Star Fluid Controls [1500 psi (102 bar); 3 gpm (11.4 lpm)]. Includes manifold with pressure-reducing valve, flow control valve, pressure gauge, shut-off ball valves and 3 ft (0.9 m) supply and return hoses. Instruction manual 308395.
236865	Power-Star and Viscount II Fluid Controls [1500 psi (102 bar); 12 gpm (45.4 lpm)]. Includes manifold with pressure-reducing valve, flow control valve, pressure gauge, shut-off ball valves and 3 ft (0.9 m) supply and return hoses. Instruction manual 308395.
237904	1:1 Dyna-Star Thermal Relief Valve, 1600 psi (110 bar)
235998	Mini Fire-Ball 225, 3:1 thermal relief valve rated to 600 psi (41 bar)

Accessories

Follower Plates

224916	Follower plate for 35 lb (16 kg)
223700	Follower plate for 120 lb (55 kg)
223701	Follower plate for 400 lb (180 kg)

Covers

224915	Cover for 35 lb (16 kg)
204574	Cover for 120 lb (55 kg)
200326	Cover for 400 lb (180 kg)

Tie-Down Covers

222060*	Tie-Down Cover for 120 lb (55 kg)
207366**	Tie-Down Cover for 400 lb (180 kg)

*Use with hold-down kit 222061 **Use with hold-down kit 207361



222902



236754



224741



247540

Oil and Grease Dispensing Packages

Manually Operated Pumps

16 Gallon (60 l) Metered and Non-Metered Dispensing Packages

Designed for manual dispensing of fluid oil from bulk containers to point of application.

Description	Portable Metered ATF Dispenser	Portable Metered Gear Lube Dispenser	Cart-Mounted Metered Gear Lube Dispenser	Stationary Non-Metered Gear Lube Dispenser	Portable Non-Metered Gear Lube Dispenser
Package Number	225880	225376	225384	225380	225378 *
Pump Only	204867				
Metered Dispense Kit	239707	239705		-	-
Dispense Kit	-	-	-	214658	214658
Hose Diameter	-	-	1/2 in (12.7 mm)		
Hose Length	-	-	6 ft (1.8 m)		
Drum Cover	204574				
Caster Base	203622		-	-	203622
Cart	-	-	203650	-	-
Instruction Manual	306436				

* Hydraulic; can be used for gear oil dispensing.

Pail Dispensing Package for 5 gal (20 l) Pails

Mounts on top of a standard 5 gal (20 l) pail (pail not included).
Delivery hose has curved nozzle that stores in cover port.

Description	Economy Gear-Lube Dispenser (Dispenses 1.6 to 1.9 oz. [47.3 to 56.2 ml] per stroke)
Package No.	226289
Hose length	4 ft (1.2 m)
Instruction manual	306875



Windshield Wash and Coolant Transfer

Manually Operated Pumps

Pumping Bulk Lubricants out of 16 gal (60 l) or 55 gal (200 l) Drums⁽¹⁾

All pumps come with suction tube and bung adapter.

Description	Lever Pump ⁽²⁾	Rotary Pump ⁽³⁾	Hand-Lever Diaphragm Pump ⁽⁴⁾
Pump Number	114829	226290	112202
Delivery rate	0.1 gal (0.4 l) per downstroke	1 gal (3.7 l) per 18 cycles	1 gal (3.7 l) per 9 cycles
Fluids Handled	Petroleum-based products, Anti-freeze	Petroleum-based products	Petroleum-based products ⁽⁵⁾
Hose Length	-	-	8 ft (2.5 m)
Instruction manual	-	306876	-

⁽¹⁾ Drums not included

⁽²⁾ Telescopic suction tube mounts 2 npt bung opening of 16 gal (60 l) or 55 gal (200 l) drum. Package includes bung adapter and spout outlet.

⁽³⁾ Package has adjustable 2 npt bung mounting to allow use with either 16 gal (60 l) or 55 gal (200 l) drum. Package includes bung adapter and spout outlet.

⁽⁴⁾ A double-action high volume pump for gasoline and similar petroleum products. Fits 30 gal (113 l) to 55 gal (200 l) drum. Complete with an 8 ft (2.4 m) hose with 3/4 in fittings and aluminum telescoping suction pipe. Delivers approximately one gallon per nine strokes.

⁽⁵⁾ This package is recommended for gasoline, diesel, heating oil and petroleum products, but NOT recommended for water-based fluids, solvents or weak acids.

Manual Dispense from Bulk Containers

Description	Buckshot Luber with Booster Gun	Buckshot Luber without Booster Gun	Grease Gun Fill Pump	Grease Gun Fill Pump
Container Size	35 lb (16 kg)			120 lb (55 kg)
Package No.	225914 ⁽¹⁾	225844 ⁽¹⁾	112197 ⁽²⁾	112198 ⁽²⁾
Pump	203702	-	-	-
Dispense Kit	203703	Filler Adapter ⁽³⁾		
Booster Gun	203697	-	-	-
Cover and Follower Plate	203701	-	-	-
Instruction Manual	306455	-	-	-

⁽¹⁾ Delivers 1/4 oz (0.7 grams) of grease per stroke at pressures to 3,000 psi (207 bar). Can service fittings directly or be used to charge a booster gun for more efficiency at higher pressures.

⁽²⁾ Fills all three-way loading grease guns equipped with filler fittings.

⁽³⁾ Dispense kit 203703 can be used for direct greasing applications (must be ordered separately).



LD Series Enclosed Hose Reels

Hose Reels and Packages

Features and Benefits

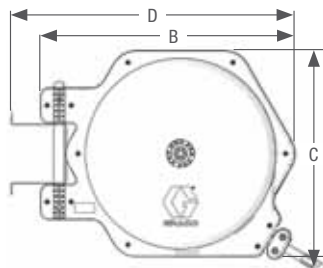
- Designed for light-duty applications
- Enclosed for safety and protection, extends hose life
- Flexible mounting options—hang on wall or ceiling; bench, table or tank top-mount options are available
- Full-flow swivel maximizes fluid flow with minimal pressure drop
- Easy spring tension adjustment—increase or decrease pressure spring tension while reel is pressurized

Typical Applications

- Small maintenance shops
- Tire/muffler shops
- Small fast lubes
- Independent repair facilities
- Industrial manufacturing facilities

Typical Fluids Handled

- Petroleum— and synthetic—based oils
- Grease
- Air only
- Air/water
- Anti-Freeze
- Windshield Washer



Dimensions

LD SERIES	
A	7.1 in (180 mm)
B	23.0 in (585 mm)
C	18.5 in (470 mm)
D	25.6 in (650 mm)



Enclosed hose reel comes with ceiling/wall mounting swivel bracket. Required inlet hose kit sold separately.

NPT Replacement Reels* Ordering Information

Part Number	Application	Hose Size Id x Length		Pressure psi (bar)	Connection Size Inlet NPT(m) x Outlet NPT(m)
24H655	Air Only	6 mm x 11 m	1/4 in x 35 ft	250 (17.2)	1/2 in x 1/4 in
24H656	Air Only	6 mm x 15 m	1/4 in x 50 ft	250 (17.2)	1/2 in x 1/4 in
24H657	Air/Water	10 mm x 11 m	3/8 in x 35 ft	250 (17.2)	1/2 in x 3/8 in
24H658	Air/Water	10 mm x 15 m	3/8 in x 50 ft	250 (17.2)	1/2 in x 3/8 in
24H659	Air/Water	12 mm x 11 m	1/2 in x 35 ft	250 (17.2)	1/2 in x 1/2 in
24H660	Air/Water	12 mm x 14 m	1/2 in x 45 ft	250 (17.2)	1/2 in x 1/2 in
24H661	Oil	10 mm x 11 m	3/8 in x 35 ft	1800 (124)	1/2 in x 3/8 in
24H662	Oil	12 mm x 11 m	1/2 in x 35 ft	1800 (124)	1/2 in x 1/2 in
24H663	Grease	6 mm x 11 m	1/4 in x 35 ft	5000 (345)	3/8 in x 1/4 in

*Reel only. Mounting Hardware is not included



Hose Inlet Kit for LD enclosed reels

Hose Inlet Kits for LD Enclosed Hose Reel

	Part Number	Hose Inlet Description	Fits Reel	Pressure psi (bar)	Hose id in (mm)	Length in (mm)	Hose Inlet in	Hose Outlet in
For NPT connections	24C443	Air	24H655	250 (17.2)	1/4 (6)	36 in (915)	1/4 npt(m)*	1/4 npt(m)*
	24C444		24H656		3/8 (10)		1/2 npt(m)*	3/8 npt(m)*
	24C445	Air/water	24H657		1/2 (12)			1/2 npt(m)*
	24C537		24H658	1,800 (124)	3/8 (10)			3/8 npt(m)*
	24C538	Oil	24H661		1/2 (12)			1/2 npt(m)*
	24C539		24H662	5,000 (345)	1/4 (6)		1/4 npt(m)*	1/4 npt(m)*
		Grease	24H663					

* NPT hose connection when using BSP to NPT adapter (included)

LD Series Enclosed Hose Reels

Hose Reels and Packages

Wall Mount Package* (NPT)

Package Part Number	Application	Hose Size Id x Length	Reel (NPT)	Wall Mount Kit	Inlet Kit
24F735	Air	1/4 in x 35 ft	24H655	24G866	24C443
24F736	Air	1/4 in x 50 ft	24H656	24G866	24C443
24F737	Air/Water	3/8 in x 35 ft	24H657	24G866	24C444
24F738	Air/Water	3/8 in x 50 ft	24H658	24G866	24C444
24F739	Air/Water	1/2 in x 35 ft	24H659	24G866	24C444
24F740	Air/Water	1/2 in x 45 ft	24H660	24G866	24C444
24F741	Oil	3/8 in x 35 ft	24H661	24G866	24C537
24F742	Oil	1/2 in x 35 ft	24H662	24G866	24C538
24F743	Grease	1/4 in x 35 ft	24H663	24G866	24C539

*Hose Reel, Inlet Kit, Wall Mount Bracket Kit Included



Fixed Mount Package* (NPT)

Package Part Number	Application	Hose Size Id x Length	Reel (NPT)	Wall Mount Kit	Inlet Kit
24F753	Air	1/4 in x 35 ft	24H655	24G865	24C443
24F754	Air	1/4 in x 50 ft	24H656	24G865	24C443
24F755	Air/Water	3/8 in x 35 ft	24H657	24G865	24C444
24F756	Air/Water	3/8 in x 50 ft	24H658	24G865	24C444
24F757	Air/Water	1/2 in x 35 ft	24H659	24G865	24C444
24F758	Air/Water	1/2 in x 45 ft	24H660	24G865	24C444
24F759	Oil	3/8 in x 35 ft	24H661	24G865	24C537
24F760	Oil	1/2 in x 35 ft	24H662	24G865	24C538
24F761	Grease	1/4 in x 35 ft	24H663	24G865	24C539

*Reel, Inlet kit, Fixed Bracket Kit



Swivel Mount Package* (NPT)

Package Part Number	Application	Hose Size Id x Length	Reel (NPT)	Wall Mount Kit	Inlet Kit
24F771	Air	1/4 in x 35 ft	24H655	24C772	24C443
24F772	Air	1/4 in x 50 ft	24H656	24C772	24C443
24F773	Air/Water	3/8 in x 35 ft	24H657	24C772	24C444
24F774	Air/Water	3/8 in x 50 ft	24H658	24C772	24C444
24F775	Air/Water	1/2 in x 35 ft	24H659	24C772	24C444
24F776	Air/Water	1/2 in x 45 ft	24H660	24C772	24C444
24F777	Oil	3/8 in x 35 ft	24H661	24C772	24C537
24F778	Oil	1/2 in x 35 ft	24H662	24C772	24C538
24F779	Grease	1/4 in x 35 ft	24H663	24C772	24C539

*Hose Reel, Inlet Kit, Swivel Bracket Kit



Mounting Kits Ordering Information

Part Number	Description
24G866	Wall Mount Kit
24G865	Fixed Bracket New Installation Kit
24E506	Fixed Bracket Replacement Kit
24C772	Swivel Bracket Kit



Ceiling/Wall Stationary Bracket 24E506

Tote, Bench or Wall Mount Post 24C772

SD Series Hose Reels

Hose Reels and Packages

Features and Benefits

- Designed for daily use applications, such as dealerships, fleet service and maintenance facilities
- Structurally engineered frame made from high strength steel won't bend or flex
- Long-lasting spring provides constant spring torque through the entire range of motion
- Flexible positioning of guide arm for mounting on bench or ceiling, wall or utility truck
- Steel spool for demanding applications
- Open swivel ports ensure high fluid flow with minimal pressure loss
- Enclosure kits available—ideal when appearance and protection is important
- Available in six colors. Metallic blue is standard

Typical Applications

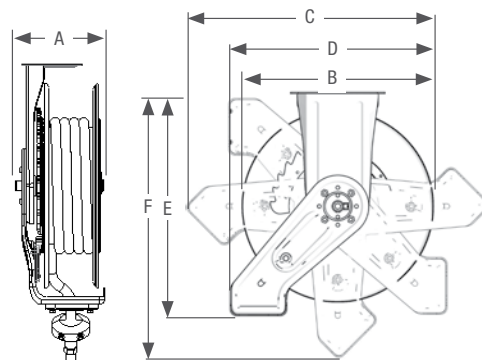
- Car dealerships
- Light/medium-duty truck dealers
- Fleet maintenance
- Mining maintenance
- Public works garages
- Construction vehicle maintenance
- Light-utility service trucks

Typical Fluids Handled

- Petroleum and synthetic based oils
- Grease
- Air
- Water
- Anti-freeze
- Windshield washer

Dimensions

SD SERIES SIZE 10		SD SERIES SIZE 20	
A	7.0 in (177 mm)	A	7.0 in (177 mm)
B	16.2 in (412 mm)	B	18.1 in (460 mm)
C	21.0 in (533 mm)	C	23.4 in (594 mm)
D	17.1 in (435 mm)	D	19.2 in (488 mm)
E	19.5 in (495 mm)	E	21.8 in (554 mm)
F	22.5 in (571 mm)	F	25.2 in (640 mm)



Single pedestal with metal spool. Inlet Hose Kit sold separately.

Ordering Information

Technical Specifications

Applications		Model numbers by color					Pressure		Hose		Connection Size		Operating Temp.
		Metallic Blue	White	Red	Black	Dark Blue	Yellow	psi (bar)	id (in)	Length ft (m)	Inlet npsm(m)	Outlet	
Air, Water, Anti-freeze, Windshield Washer Fluid	SIZE 10	HPL23B	HPL23A	HPL23C	HPL23D	HPL23E	HPL23F	300 (20.7)	3/8	35 (11)	1/2	3/8 npt (m)	-20°–190° F (-28°–87° C)
		HPL25B	HPL25A	HPL25C	HPL25D	HPL25E	HPL25F	300 (20.7)	3/8	50 (15)	1/2	3/8 npt (m)	
		HPL33B	HPL33A	HPL33C	HPL33D	HPL33E	HPL33F	300 (20.7)	1/2	35 (11)	1/2	1/2 npt (m)	
	SIZE 20	HPL56B	HPL56A	HPL56C	HPL56D	HPL56E	HPL56F	300 (20.7)	3/8	65 (20)	1/2	3/8 npt (m)	
		HPL65B	HPL65A	HPL65C	HPL65D	HPL65E	HPL65F	300 (20.7)	1/2	50 (15)	1/2	1/2 npt (m)	
Petroleum or Synthetic based Oils	SIZE 10	HPM33B	HPM33A	HPM33C	HPM33D	HPM33E	HPM33F	2,000 (138)	1/2	35 (11)	1/2	1/2 npt (m)	
		HPM3BB*	HPM3BA*	HPM3BC*	HPM3BD*	HPM3BE*	HPM3BF*	2,000 (138)	1/2	35 (11)	1/2	1/2 npsm (f)	
	SIZE 20	HPM65B	HPM65A	HPM65C	HPM65D	HPM65E	HPM65F	2,000 (138)	1/2	50 (15)	1/2	1/2 npt (m)	
		HPM6DB*	HPM6DA*	HPM6DC*	HPM6DD*	HPM6DE*	HPM6DF*	2,000 (138)	1/2	50 (15)	1/2	1/2 npsm (f)	
Grease	SIZE 10	HPH15B	HPH15A	HPH15C	HPH15D	HPH15E	HPH15F	5,000 (345)	1/4	50 (15)	3/8	1/4 npt (m)	-40°–200° F (-40°–93° C)
		HPH23B	HPH23A	HPH23C	HPH23D	HPH23E	HPH23F	4,000 (276)	3/8	35 (11)	3/8	1/4 npt (m)	
		HPH1DB*	HPH1DA*	HPH1DC*	HPH1DD*	HPH1DE*	HPH1DF*	5,000 (345)	3/8	35 (11)	3/8	1/4 npt (f)	
	SIZE 20	HPH55B	HPH55A	HPH55C	HPH55D	HPH55E	HPH55F	4,000 (276)	3/8	50 (15)	3/8	1/4 npt (m)	
		HPH5DB*	HPH5DA*	HPH5DC*	HPH5DD*	HPH5DE*	HPH5DF*	4,000 (276)	3/8	50 (15)	3/8	1/4 npt (f)	

* Bare Reel—hose sold separately Wetted parts—bare hose reel only: zinc plated steel, steel, nitrile rubber Dry Weight: 52 lbs (23.5 kg) Instruction Manual: 313431

SD Hose Reel Packages and Accessories

Hose Reels and Packages

SD Reel Packages with Enclosure Kit

	Application	SD Packages	Hose Reel	Hose Inlet Kit	White Enclosure	Valve/Meter	Fitting
Steel Spool	Air/Water	24D989	HPL23B	218549	24A217	—	—
	Air/Water	24D990	HPL25B	218549	24A217	—	—
	Air/Water	24D991	HPL33B	218549	24A217	—	—
	Air	24D992	HPL23B	218549	24A217	218545	—
	Water	24D993	HPL23B	218549	24A217	180685	150287
	Water	24D994	HPL33B	218549	24A217	180685	159842
	Motor Oil	24D995	HPM33B	218549	24A217	—	—
	Motor Oil	24D996	HPM33B	218549	24A217	255350	—
	Motor Oil	24D997	HPM33B	218549	24A217	255348	—

SD Reel Packages without Enclosure Kit

	Application	SD Packages	Hose Reel	Hose Inlet Kit	Enclosure	Valve/Meter	Fitting
Steel Spool	Air	24D998	HPL23B	218549	—	218545	—
	Water	24D999	HPL23B	218549	—	180685	150287
	Motor Oil	24E001	HPM33B	218549	—	255350	—
	Motor Oil	24E002	HPM33B	218549	—	255348	—

Hose Inlet Kits for SD and XD10 and 20		Pressure psi (bar)	Hose id in (mm)	Length in (mm)	Hose Inlet
218549	Low/medium pressure	2000 (137)	1/2 (12)	24 (610)	npt(m)
218550	High pressure	4000 (276)	3/8 (10)	24 (610)	npt(m)
224417	High pressure	5000 (345)	1/4 (6)	24 (610)	npt(m)

Enclosure Kits

Reel Enclose Kits for One Reel	Provides protection to extend the life of hoses and bearings for SD single pedestal reels					
	White*	Metallic Blue	Red	Black	Dark Blue	Yellow
Size 10 Enclosure	24A217	24A940	24A941	24A942	24A943	24A944
Size 20 Enclosure	24A218	24A945	24A946	24A947	24A948	24A949
Size 10 End Caps (2)	—	—	—	24A950	—	—
Size 20 End Caps (2)	—	—	—	24A951	—	—

Enclosure Mounting channel

Description	Enclosure mounting channel kits include all parts for mounting hose reels to walls or ceilings					
	1 Reel	2 Reels	3 Reels	4 Reels	5 Reels	6 Reels
SD10/SD20 Open	24A934	24A935	24A936	24A937	24A938	24A939
XD10/XD20 Open	24A219	24A220	24A221	—	—	24A222
SD Enclosed	203521	203522	203523	203524	203525	203526

Mounting Channel, Brackets and Ball Stop Kits

Retrofit Adapter Kits

24A224	Includes all parts to mount hose reel to existing 500 series mounting pattern
24C100	Includes all parts to convert SD10 hose reels to fit existing 250 series enclosures

Mounting Bracket (Secures mounting channel to I-beam without drilling)

204741	Two brackets are required for 1-3 hose reels; three brackets for 4-6 hose reels
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Ball Stop Kits

222225	For 1/4 in (6.4 mm) i.d. hose (Not for use with XD30, 700 or 750)
218340	For 1/4-3/8 in (6.4-9.5 mm) i.d. hose (Not for use with XD30, 700 or 750)
218341	.782 ID used for 3/8 in and 1/2 in (9.5 mm and 12.7 mm) hose (Not for use with XD30, 700 or 750)
237872	1.0 ID used for 5/8 in (15.9 mm) hose
237873	1.123 ID used for 3/4 in (19.1 mm) hose
237874	1.374 ID used for 1 in (25.4 mm) hose
24D132	For 3/8 in (9.5 mm) o.d. hose
24D133	For 1/2 in (12.7 mm) o.d. hose



XD Series Hose Reels

Hose Reels and Packages

Features and Benefits

- Designed for robust/heavy-duty applications such as mobile lube trucks or large equipment service, yet with a narrow footprint to fit more reels into small spaces
- Dual pedestal frame provides increased strength for extreme-duty applications
- Long lasting spring is sealed for protection against the weather
- Durable steel spool rides on sealed roller bearings to ensure trouble-free performance
- Available in four colors. Metallic blue is standard
- Available with arms removed for bulkhead mounting

Typical Applications

- Heavy-duty truck dealers
- Fleet maintenance
- Mining maintenance
- Public works garages
- Construction vehicle maintenance
- Heavy-duty mobile service trucks
- Mining

Typical Fluids Handled

- Petroleum and synthetic based oils
- Grease
- Fuel evacuation
- Pressure wash
- Air
- Water
- Anti-freeze
- Windshield washer

Note: Hose Inlet Kit for all XD Reels sold separately.

Dimensions

XD SERIES SIZE 10	
A	7.5 in (196 mm)
B	16.2 in (412 mm)
C	21.0 in (533 mm)
D	18.0 in (457 mm)
E	18.5 in (470 mm)
F	22.5 (571 mm)

XD SERIES SIZE 20	
A	7.5 in (196 mm)
B	18.1 in (460 mm)
C	23.4 in (594 mm)
D	20.0 in (508 mm)
E	21.0 in (533 mm)
F	25.2 in (640 mm)

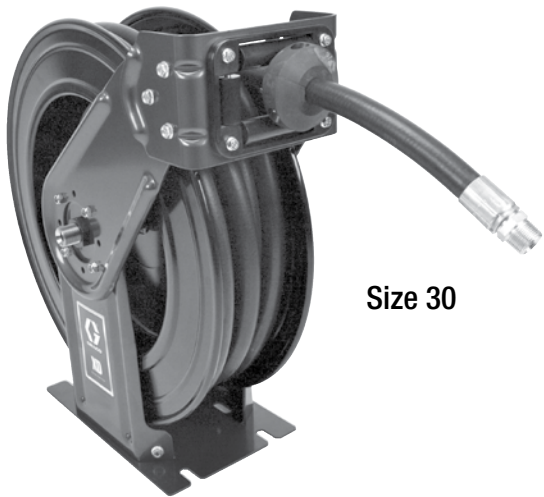
XD SERIES SIZE 30	
A	9.0 in (229 mm)
B	21.50 in (546.00 mm)
C	25.96 in (659.45 mm)
D	22.12 in (561.73 mm)
E	23.10 in (588.00 mm)
F	27.60 in (700.82 mm)



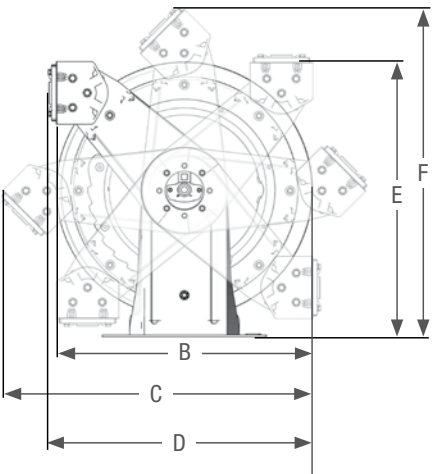
Size 10



Size 20



Size 30



XD Series Hose Reels

Hose Reels and Packages

Ordering Information

Technical Specifications

Applications		Model numbers by color				Pressure	Hose		Connection Size		Operating Temp.			
		Metallic Blue	White	Yellow	Desert Sand	psi (bar)	id in	Length ft (m)	Inlet in	Outlet in				
Air, water, Anti-freeze, windshield Washer fluid	SIZE 10	HSL25B	HSL25A	HSL25F	HSL25G	300 (20.7)	3/8	50 (15)	1/2 npsm(m)	3/8 npt(m)	-20–190° F (-28–87° C)			
		HSL33B	HSL33A	HSL33F	HSL33G		1/2	35 (11)		1/2 npt(m)				
	SIZE 20	HSL56B	HSL56A	HSL56F	HSL56G		3/8	65 (20)		3/8 npt(m)				
		HSL65B	HSL65A	HSL65F	HSL65G		1/2	50 (15)		1/2 npt(m)				
	SIZE 30	HSLC8B	HSLC8A	HSLC8F	HSLC8G		1/2	75 (23)	1/2 npt(m)	3/4 npsm(m)	3/4 npt(m)	-40–180° F (-40–82° C)		
		HSLD5B	HSLD5A	HSLD5F	HSLD5G		3/4	50 (15)	3/4 npt(m)					
Petroleum– and synthetic– based oils	SIZE 10	HSM33B	HSM33A	HSM33F	HSM33G	2,000 (138)	1/2	35 (11)	1/2 npsm(m)	1/2 npt(m)	-20–190° F (-28–87° C)			
		HSM3BB *	HSM3BA *	HSM3BF	HSM3BG			35 (11)		1/2 npt(f)				
	SIZE 20	HSM65B	HSM65A	HSM65F	HSM65G			50 (15)		1/2 npt(m)				
		HSM6DB *	HSM6DA *	HSM6DF *	HSM6DG			50 (15)		1/2 npt(f)				
	SIZE 30**	HSMC8B	HSMC8A	HSMC8F	HSMC8G	1,500 (103)	1/2	75 (23)	3/4 npsm(m)	1/2 npt(m)	-40–180° F (-40–82° C)			
		HSMCFB *	HSMCFA *	HSMCFF *	HSMCFG *	2,000 (138)		75 (23)		1/2 npsm(f)				
		HSMD5B	HSMD5A	HSMD5F	HSMD5G	1,250 (86)	3/4	50 (15)		3/4 npt(m)				
		HSMDDB *	HSMDDA *	HSMDDF *	HSMDDG *	2,000 (138)	3/4			3/4 npsm(f)				
Grease	SIZE 10	HS115B	HS115A	HS115F	HS115G	5,000 (345)	1/4	50 (15)	3/8 npsm(m)	1/4 npt(m)	-40–200° F (-40°–93° C)			
		HS11DB *	HS11DA *	HS11DF *	HS11DG *		3/8	35 (11)	3/8 npt(f)					
	SIZE 20	HS155B	HS155A	HS155F	HS155G	4,000 (276)	1/2	50 (15)	1/2 npsm(m)	1/4 npt(m)				
		HS15DB*	HS15DA*	HS15DF*	HS15DG*	5,000 (345)				3/8 npsm(f)				
	SIZE 30**	HS15CB	HS15CA	HS15CF	HS15CG	5,000 (345)				1/2	50 (15)	1/2 npsm(m)	1/2 npt(m)	-40–180° F (-40–82° C)
		HS15CDB *	HS15CDA *	HS15CDF *	HS15CDG *								1/2 npsm(f)	
Pressure wash	SIZE 30	HSPB8B	HSPB8A	HSPB8F	HSPB8G	4,000 (276)	3/8	75 (23)	1/2 npsm(m)	3/8 npt(m)	-20–225° F (-28–107° C)			
		HS15FFB *	HS15FFA *	HS15FFF *	HS15FFG *					3/8 npsm(f)				
Fuel/Evacuation	SIZE 30	HSLE3B	HSLE3A	HSLE3F	HSLE3G	125 (8.6)	1	30 (9)	3/4 npsm(m)	1 npt(m)	-40–120° F (-40–49° C)			
DEF	SIZE 30	HSDD5B	HSDD5A	HSDD5F	NA	50 (3.4)	3/4	50 (15)	3/4 bspp(m)	3/4 bspp ORB	12–140° F (-11–60° C)			
		HSDDDB	HSDDDA	HSDDDF	NA									

Maximum dry weight with hose: XD10 = 54 lbs (24.5 kg), XD20 = 59 lbs (27 kg), XD30 = 98 lbs (44.5 kg)

Wetted parts–Bare hose reel only: zinc plated steel, anodized aluminum, nitrile rubber

Instruction Manuals: XD10 and XD20: 313431, XD30: 3A0138

* Bare reel–hose sold separately

** Not recommended for overhead installation. Maximum installed height is 7 feet (2.13 meters).

XD Series HN Model Hose Reels

Hose Reels and Packages

Features and Benefits

Ideally suited for lube truck installations where space is a premium. Structurally engineered frame and spool is made from high strength steel that won't bend or flex. Long-lasting spring provides constant spring torque through the entire range of motion. Open swivel ports ensure high fluid flow with minimal pressure loss.

Typical Applications

- Mining maintenance
- Public works garages
- Construction vehicle maintenance
- Light-utility service trucks

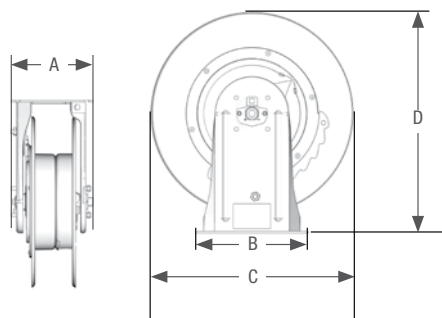
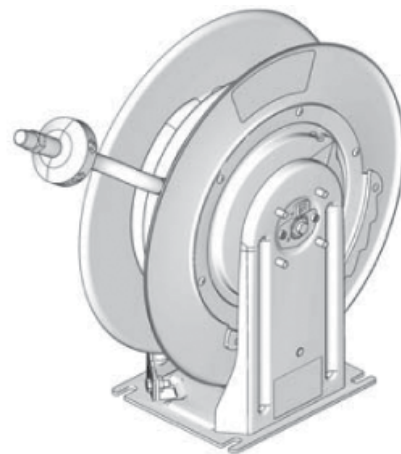
Typical Fluids Handled

- Petroleum and synthetic based oils
- Grease
- Air/Water
- Anti-freeze
- Fuel Evacuation

Dimensions

XD30 Hose Reels HN Model

A	9.0" (229 mm)
B	13.77" (350.00 mm)
C	21.50" (546.00 mm)
D	23.10" (588.00 mm)



Ordering Information

Technical Specifications

Applications		Model numbers by color			Pressure psi (bar)	Hose		Connection Size		Operating Temp.
		Metallic Blue	White	Yellow		id in.(M)	Length ft (m)	Inlet npsm(m)	Outlet	
Air, Water, Anti-Freeze, Windshield Washer Fluid	Size 20	HNL56B	HNL56A	HNL56F	300 (20.7)	3/8	65	1/2 npsm(m)	3/8npt(m)	-20° F to 190° F (-28° C to 87° C)
		24C246^	24C245^	24C247^	300 (20.7)	3/8	65	1/2 npsm(m)	3/8npt(m)	
		HNL65B	HNL65A	HNL65F	300 (20.7)	1/2	50	1/2 npsm(m)	1/2 npt(m)	
		24C249^	24C248^	24C250^	300 (20.7)	1/2	50	1/2 npsm(m)	1/2 npt(m)	
	Size 30	HNLC8B	HNLC8A	HNLC8F	300 (20.7)	1/2	75	1/2 npsm(m)	1/2 npt(m)	-40° F to 180° F (-40° C to 82° C)
		HNLD5B	HNLD5A	HNLD5F	300 (20.7)	3/4	50	3/4 npsm(m)	3/4 npt(m)	
Petroleum- and synthetic based oils	Size 20	HNM65B	HNM65A	HNM65F	2000 (138)	1/2	50	1/2 npsm(m)	1/2 npt(m)	-20° F to 190° F (-28° C to 87° C)
		24C252^	24C251^	24C253^	2000 (138)	1/2	50	1/2 npsm(m)	1/2 npt(m)	
	Size 30	HNMC8B	HNMC8A	HNMC8F	1500 (103)	1/2	75	1/2 npsm(m)	1/2 npt(m)	-40° F to 180° F (-40° C to 82° C)
		HNMD5B	HNMD5A	HNMD5F	1250 (86)	3/4	50	3/4 npsm(m)	3/4 npt(m)	
		HNMDDB*	HNMDDA*	HNMDDF*	2000 (138)	3/4	50	3/4 npsm(m)	3/4 npt(m)	
Grease	Size 20	HNH55B	HNH55A	HNH55F	4800 (331)	3/8	50	3/8 npsm(m)	1/4 npt(m)	-40° F to 200° F (-40° C to 93° C)
		24C255^	24C254^	24C256^	4800 (331)	3/8	50	3/8 npsm(m)	1/4 npt(m)	
	Size 30	HNHC5B	HNHC5A	HNHC5F	5000 (345)	1/2	50	1/2 npsm(m)	1/2 npt(m)	-40° F to 180° F (-40° C to 82° C)
		HNHCDB*	HNHCDA*	HNHCDF*	5000 (345)	1/2	50	1/2 npsm(m)	1/2 npt(m)	
Pressure Wash	Size 30	HNPB8B	HNPB8A	HNPB8F	4000 (276)	3/8	75	1/2 npsm(m)	3/8 npt(m)	-20° F to 225° F (-28° C to 107° C)
		HNHFFB*	HNHFFA*	HNHFFF*	4000 (276)	3/8	75	1/2 npsm(m)	3/8 npsm(f)	
Fuel/ Evacuation	Size 30	HNLE3B	HNLE3A	HNLE3F	1250 (86)	1	30	3/4 npsm(m)	1 npt(m)	-40° F to 100° F (-40° C to 49° C)

*Bare reel- hose sold separately ^ Reel package includes hose guide kit 15Y478

Wetted parts—bare hose reel only: zinc plated steel, steel, nitrile rubber HN Dry Weight: 64 pounds (29.0 kg) Instruction Manual: 3A0138

Wetted parts—HSL, HSM, HNL, and HNM Models are Nickel Plated Carbon Steel, Aluminum, Buna N Rubber, UHMWPE. HSH, HSP, HNH, and HNP Models are Nickel Plated Stainless Steel, Buna N Rubber, UHMWPE

700 Series Hose Reels

Hose Reels and Packages

Features and Benefits

- Fully ported swivel and shaft for unrestricted flow
- Handles hose lengths up to 75 ft (23 m)
- Heavy-duty ball bearings outlast sleeved-type bearings
- Easy rewind with minimal hose guidance

Typical Applications

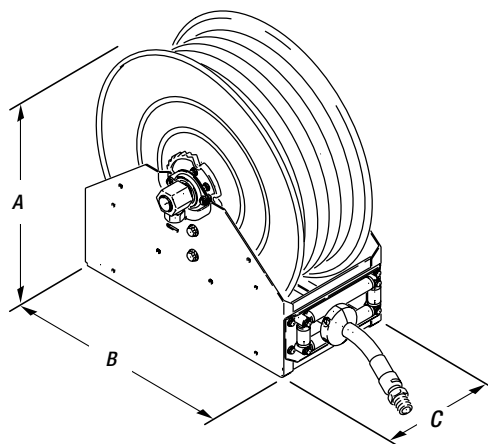
- Heavy-duty truck dealers
- Fleet maintenance
- Mining maintenance
- Public works garages
- Construction vehicle maintenance
- Heavy-duty mobile service trucks
- Mining

Typical Fluids Handled

- Petroleum and synthetic based oils
- Grease
- Fuel evacuation
- Pressure wash
- Air
- Water
- Anti-freeze
- Windshield washer

Dimensions

700 SERIES	
A	26.25 in (628 mm)
B	24.0 in (609 mm)
C	11.83 in (300 mm)



237875 with 237932
Overhead mounting kit.
Includes all parts needed
for ceiling-mounting.

Technical Specifications

Inlet npsm (m)	Outlet npt (m)	Max. Pressure Psi (bar)	Maximum Vacuum	Operating Temp.	Wetted Parts	Weight (bare reel)	Instruction Manual
1 npt(f)	1 npt(f)	1500 psi (bare reel)	24 in Hg	-40° F to 180° F (-40° C to 82° C)	Carbon Steel, Buna	103 lb (46.7 kg)	308546

Ordering Information

Medium-Pressure Oil Dispense Reels (rated to 1500 psi/103 bar)	
237728	Bare Hose Reel
237879 *	Hose Reel with 3/4 in x 75 ft (19.1 mm x 23 m) hose
Medium-Pressure Oil Evacuation and Dispense Reels (rated to 212 psi/14.6 bar)	
241910 *	Hose Reel with 1 in x 50 ft (25.4 mm x 15 m) hose; 24 in (0.3 m) Hg vacuum
Medium-Pressure Fuel Dispense Reel (rated to 125 psi/8.6 bar)	
237884 *	Hose Reel with 1 in x 50 ft (25.4 mm x 15 m) hose

* Not recommended for overhead installation

700 Series Hose Reels

Hose Reels and Packages

Features and Benefits

- Heavy-duty, high volume reel
- Industrial-grade paint for high abrasion and corrosion resistance
- Full-flow shaft
- Heavy-duty brackets and springs
- Rugged base and hose rollers
- Heavy-duty latch mechanism

Typical Applications

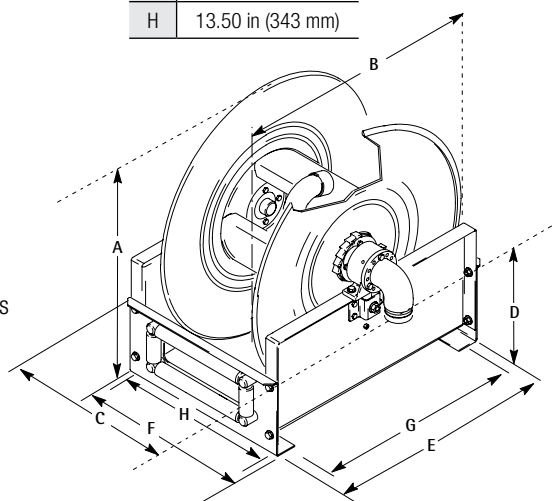
- Heavy-duty truck dealers
- Fleet maintenance
- Mining maintenance
- Public works garages
- Construction vehicle maintenance
- Heavy-duty mobile service trucks
- Mining

Typical Fluids Handled

- Petroleum and synthetic based oils
- Water
- Anti-freeze
- Unleaded and diesel fuels

Dimensions

750 Series	
A	26.25 in (667 mm)
B	26.25 in (667 mm)
C	21.88 in (556 mm)
D	13.75 in (349 mm)
E	24.25 in (616 mm)
F	17.50 in (445 mm)
G	22.125 in (562 mm)
H	13.50 in (343 mm)



Technical Specifications

Inlet npsm (m)	Outlet npt (m)	Max. Pressure Psi (bar)	Hose Capacity	Operating Temp.	Wetted Parts	Weight (bare reel)	Instruction Manual
1-1/2 npt(f)	1-1/2 npt(f)	375 psi (26 bar)	50 ft (15.2m) x 1.50 in ID Hose	150° F (65° C)	Carbon Steel, Buna	139 lbs (63 kg)	309442

Ordering Information

Bulk Dispense Reels (rated to 125psi/8.6 bar)	
245410	Bare hose reel

XD, 700 and 750 Series Hose Reel Accessories

Hose Reels and Packages

Ordering Information

Reel Enclosure Mounting Channel	Accommodates one, two, three, four, five or six reels (includes all parts for wall or ceiling mounts)					
	1 Reel	2 Reels	3 Reels	4 Reels	5 Reels	6 Reels
SD10/SD20 Open	24A934	24A935	24A936	24A937	24A938	24A939
XD10/XD20 Open	24A219	24A220	24A221	—	—	24A222
SD Enclosed	203521	203522	203523	203524	203525	203526

Retrofit Adapter Kits

24A224	Includes all parts to mount hose reel to existing 500 series mounting pattern
24C100	Includes all parts to convert SD10 hose reels to fit existing 250 series enclosures

Mounting Bracket

204741	Secures mounting channel to I-beam without drilling. Two brackets are required for 1-3 hose reels; three brackets for 4-6 hose reels
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Ball Stop Kits

	Typical Hose id
222225	For 1/4 in (6.4 mm) i.d. hose (Not for use with XD30, 700 or 750)
218340	For 1/4-3/8 in (6.4-9.5 mm) i.d. hose (Not for use with XD30, 700 or 750)
218341	.782 ID used for 3/8 in and 1/2 in (9.5 mm and 12.7 mm) hose (Not for use with XD30, 700 or 750)
237872	1.0 ID used for 5/8 in (15.9 mm) hose
237873	1.123 ID used for 3/4 in (19.1 mm) hose
237874	1.374 ID used for 1 in (25.4 mm) hose
24D132	For 3/8 in (9.5 mm) o.d. hose
24D133	For 1/2 in (12.7 mm) o.d. hose

Hose Inlet Kits for SD and XD10 and 20		Pressure psi (bar)	Hose id in (mm)	Length in (mm)	Hose Inlet
218549	Low/medium pressure	2000 (137)	1/2 (12)	24 (610)	npt(m)
218550	High pressure	4000 (276)	3/8 (10)	24 (610)	npt(m)
224417	High pressure	5000 (345)	1/4 (6)	24 (610)	npt(m)
Hose Inlet Kits for XD30		Pressure psi (bar)	Hose id in (mm)	Length in (mm)	Hose Inlet
24E283	High pressure	5000 (345)	1/2 (12)	24 (610)	npt(m)
24E284	Low/medium pressure	1250 (86)	3/4 (19)	24 (610)	npt(m)
24E285	Low pressure (for fuel)	125 (8.6)	1/2 (12)	24 (610)	npt(m)

700 Series Reels Accessories

237932*	Overhead mounting kit includes all parts needed for ceiling-mounting reel (one required per reel)
237944*	Roller support kit includes roller support accessories for ceiling mounted reels (reel not included)
109064	Hose inlet kit 1 (mbe) x 28 in (71 cm)

*Required for overhead mounting

DEF Hoses

124875	DEF hose, 2 ft, 3/4 in BSPP (M) x cut end (inlet hose)
124581	DEF hose, 6 ft, 3/4 in BSPP (M) x cut end (inlet hose)

Valve Hanger Kit

224444	Mounts to side of reel to allow hanging of non-metered and high flow dispensing valves
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Metal Label Kits (includes one 3/4 in x 4-1/4 in (1.9 cm x 10.8 cm) metal label and mount)

218670	Motor oil	218675	Air	218674	Hydraulic Oil
218671	Grease	218676	Water	218673	ATF
218672	Gear lube	218677	Anti-freeze	218678	Evacuation

Self Adhesive Identification Label Set

180698	Set includes: 1 in x 5 in (25.4 mm x 127 mm) hose reels labels for Anti-Freeze, Water, SAE 5-40, SAE 10-40, SAE 20W, Hydraulic, Gear, SAE 10W, SAE 10-30, SAE 30W, Dexron, Air, Chassis, ATF
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Mounting Channel



Retrofit Bracket to fit 500 Series



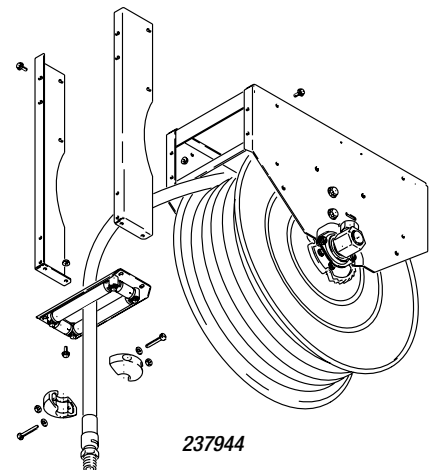
Mounting Bracket



Ball Stop Kit



Hose Inlet Kit for SD and XD open reels



237944

Dispense Consoles

Multi-Station Consoles and Accessories

Multi-Station Consoles*

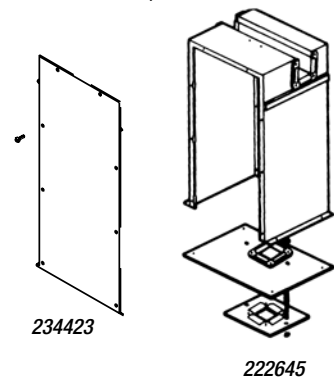
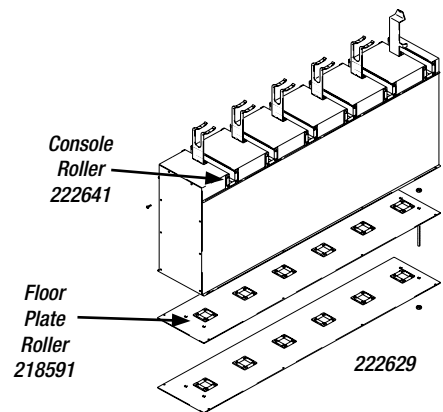
Six-Station Console	
222629	Includes upper and lower floor plates with roller guides and brackets (1-110236; 5-196471) to hold one water bib and five Graco LDM dispense valves. Console dimensions (without brackets): 27 in high x 54 in long x 12 in wide (68.58 cm high x 139.7 cm long x 25.4 cm wide). Console requires a floor opening of 6 in x 51 in (15.2 cm x 122.4 cm)
Four-Station Console	
223448	Includes upper and lower floor plates, roller guides and brackets (1-110236; 3-196471) to hold one water bib and three Graco LDM dispense valves. Console dimensions (without brackets): 27 in high x 36 in long x 12 in wide (68.58 cm high x 139.7 cm long x 25.4 cm wide). Console requires floor opening of 6 in x 33 in (15.2 cm x 83.8 cm)
Single Add-On Fluid Module	
222645	For adding-on to four- or six-station consoles. Includes add-on module, floor plates with roller guides to fit module and one 196471. Console requires floor opening of 6 in x 8-1/2 in (15.2 cm x 21.6 cm). Add-on fluid module dimensions 27 in high x 9 in long x 10 in wide (68.5 cm high x 22.86 cm long x 25.4 cm wide)

*Hoses not included

Lubricant Dispense Consoles Accessories	
110236	Water bib bracket
110237	Em6 mounting bracket
110285	Pistol-grip dispense valve bracket
196471	Universal dispense valve bracket for EM5 and PM5
249440	Matrix dispense valve bracket
222641	Console roller repair kit (upper)
218591	Floor plate roller repair kit (lower)
178670	Roller only
234423	End panel replacement comes with 8 screws

Oil Dispense Bar

220107	Tough metal cabinet with baked-on enamel finish. Constructed with single-dispense tap and waste pan with plated, perforated metal service area and drain connection. Modular convenient design allows up to 2 oil dispense taps or 3 meters to be added at the time of installation, or later if required. Instruction manual 307742. Maximum working pressure 900 psi (62 bar). 22.6 in H x 13.25 in D x 18.3 in W (57.4 cm H x 33.7 cm D x 46.5 cm W)
Tap Kit	
220112	Add to oil dispense bar to convert into two or three taps, as needed. Kit also includes non-drip dispense valve, manifold and all necessary mounting hardware
Meter Kit	
239706	Any individual tap on the oil dispense bar can be fitted with a fluid meter. Kit includes meter 239824 and all necessary mounting hardware. Maximum working pressure 500 psi (34 bar)
220110	Spigot valve replacement



LD Series Electronic Meters

Dispense Meters and Control Valves

Features and Benefits

- Manual and Preset Dispense
- Dispenses in gallons, quarts, pints and liters
- Easy to read LCD display with durable switches for long life
- Rugged engineered material for superior impact resistance and long life
- Ergonomically-designed handle for optimum comfort
- Standard rigid extension kit and automatic thermal compensating nozzle
- Optional extensions available

Typical Applications

- Metered oil dispense
- Heavy-duty dealerships
- Fleet service facilities
- For indoor use only
- Automotive dealerships
- Fast lube centers
- Service shops
- In-plant

Typical Fluids Handled

- Petroleum- and synthetic-based oils
- Anti-freeze

Technical Specifications

Flow Range ⁽¹⁾	0.1 - 5 gpm (0.4 - 19 lpm)
Maximum Working Pressure	1000 psi (69 bar)
Units of measure	Quarts, pints, gallons, liters (factory set to quarts)
Weight	3 lb (1.36 kg)
Inlet	1/2 in npt
Outlet	1/2 in npt
Operating Temperature Range	32 - 120° F (0 - 48.8° C)
Storage Temperature Range	-30 - 120° F (-34.4 - 48.8° C)
Battery	9 volt alkaline
Battery Life	one year
Wetted Parts	sst, nitrile rubber, zinc, cs, lcp
Meter Pressure Loss ⁽¹⁾	90 psi (6.2 bar) @ 5 gpm (19 lpm)
Accuracy ⁽²⁾	±0.5%
Dimensions (without extension)	11 in L x 3.25 in W x 3.25 H (28 cm L x 8.3 cm W x 8.3 cm H)
Maximum Totalizer	999,999 gallons or liters
Maximum Recorded Dispense	999.9 Units (LDP5 only)
Warranty	Two Years
Instruction Manual	312668

(1) Tested in 10W oil at 70°F. Flow rates vary with fluid pressure, temperature, viscosity, inlet fitting and nozzle type.

(2) @ 2.5 gpm (9.5 lpm) @ 70° F (21° C) with 10 wt. oil and 1 gal (3.8 l) dispensed.

May require re-calibration. Out-of-box accuracy ±1.25%. Not recommended for in-line installation.

Ordering Information

LDM5 Manual Dispense Meters	
255751	1/2 in npt(f) swivel, flexible extension and automatic nozzle for oil and anti-freeze
256215	1/2 in npt(f) swivel, rigid extension, trigger guard/boot and automatic nozzle for oil and anti-freeze
258693	1/2 in npt(f) swivel, flexible extension, trigger guard/boot and automatic nozzle for oil and anti-freeze
LDP5 Preset Dispense Meters	
255277	1/2 in npt(f) swivel, flexible extension and automatic nozzle for oil and anti-freeze
256216	1/2 in npt(f) swivel, rigid extension, trigger guard/boot and automatic nozzle for oil and anti-freeze
258694	1/2 in npt(f) swivel, flexible extension, trigger guard/boot and automatic nozzle for oil and anti-freeze



SD Series Electronic Meters

Dispense Meters and Control Valves

Features and Benefits

- Fluid inlet options (1/2 in and 3/4 in npt) meets standard and high-flow requirements
- Large LCD display and simple operator controls
- Locking trigger (LDP5/LDP15 models) and durable cast guard prevents accidental triggering
- Flush-mount nozzle valve design prevents leaks and contamination

Typical Applications

- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Lube trucks
- Fleet service facilities
- Service shops
- In-plant
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils
- Anti-freeze

Technical Specifications

Flow Range ⁽¹⁾	0.1–14 gpm (0.4 - 53 lpm)
Maximum Working Pressure	1500 psi (103.4 bar)
Weight	5 lbs (2.3 kg)
Inlet	3/4 in–14 npt or 1/2 in–14 npt
Outlet	3/4 in–16 straight thread O-ring Boss
Maximum Totalizer	999,999 gallons or liters
Maximum Recorded Dispense	999.9 Units
Maximum Pre-Set Volume	999.9 Units
Storage Temperature Range	-40–158° F (-40-70° C)
Operating Temperature Range	4–158° F (-20-70° C)
Battery	4 AA alkaline or 4 AA lithium
Battery Life ⁽³⁾	... Preset Models – six months w/alkaline, manual models – one year w/alkaline 4 AA alkaline/lithium
Wetted Parts	Aluminum, sst, pbt/pc, nitrile rubber, cs
Meter Pressure Loss ⁽¹⁾	180 psi (12 bar) @ 14 gpm (53 lpm)
Accuracy ⁽²⁾	+/- 0.5%
Dimensions (without extension)	13 in L x 3.75 in W x 5.75 in H, (33cm x 9.5cm x 14.6cm)
Warranty	Five years overall, three years electronics
Instruction Manual	312865

⁽¹⁾ Tested in 10W oil at 70° F. Flow rates vary with fluid pressure, temperature, viscosity, inlet and nozzle type.

⁽²⁾ At 2.5 gpm (9.5 lpm) @ 70° F (21° C) with 10 wt. oil and 1 gal (3.8 l) dispensed. May require re-calibration. Out-of-box accuracy ±1.25%.

⁽³⁾ Average shop use with alkaline batteries (included); 30-35% longer life with lithium AA.

Ordering Information

SDM5 MANUAL DISPENSE ELECTRONIC METER, 5 GPM OR LESS	
255350	1/2 in npt(f) swivel, rigid extension with standard automatic non-drip quick-close nozzle for oil
255348	1/2 in npt(f) swivel, flexible extension with standard automatic non-drip quick-close nozzle for oil
255349	1/2 in npt(f) swivel, extension with standard quick-close nozzle for gear lube
255802	1/2 in npt(f) swivel, rigid extension with standard quick-close nozzle for anti-freeze
255803	1/2 in npt(f) swivel, flexible extension with standard quick-close nozzle for anti-freeze
SDM15 MANUAL DISPENSE ELECTRONIC METER, 14 GPM OR LESS	
256836	1/2 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze
256837	1/2 in npt(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze
255800	3/4 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze
255801	3/4 in npt(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze
SDP5 PRESET DISPENSE ELECTRONIC METER, 5 GPM OR LESS	
255200	1/2 in npt(f) swivel, rigid extension with standard automatic non-drip quick-close nozzle for oil
255351	1/2 in npt(f) swivel, flexible extension with standard automatic non-drip quick-close nozzle for oil
255352	1/2 in npt(f) swivel, extension with standard quick-close nozzle for gear lube
255355	1/2 in npt(f) swivel, rigid extension with standard quick-close nozzle for anti-freeze
255356	1/2 in npt(f) swivel, flexible extension with standard quick-close nozzle for anti-freeze
SDP15 PRESET DISPENSE ELECTRONIC METER, 14 GPM OR LESS	
256838	1/2 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze
256839	1/2 in npt(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze
255353	3/4 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze
255354	3/4 in npt(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze



255350

EM6™ Electronic Meter

Dispense Meters and Control Valves

Features and Benefits

- Screw-tight nozzle for positive shut off
- Ball bearing swivel for ease of use
- Durable design ideal for use in harsh environments
- Reset capable for periodic dispense history information

Typical Applications

- Metered oil dispense in demanding environments
- Automotive dealerships
- Heavy-duty dealerships
- Service and fast lube centers
- Fleet service facilities
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled*

- Petroleum- and synthetic-based oils

* Not recommended for use with anti-freeze or windshield washer fluid

Technical Specifications

Maximum Operating Pressure.....	1500 psi (105 bar, 10.5.)
Operating Temperature Range.....	-40-180° F (-40-82° C)
Storage Temperature Range.....	-40-140° F (-40-60° C)
Inlet	1/2 npt
Outlet.....	1/2 npt
Wetted Parts.....	aluminum, SST, CS, acetal, nitrile rubber, Geolast™
Instruction Manual	308642
Accuracy/Repeatability	+/- 0.6%

Geolast™ is a registered trademark of Advanced Elastomer Systems.

Ordering Information

EM6 Electronic Meters	
243599	U.S. measure (rigid extension)
243600	U.S. measure (gear lube extension)
243601	U.S. measure (flexible extension)
243602	Metric measure (rigid extension)
243603	Metric measure (gear lube extension)
243604	Metric measure (flexible extension)
243992	1/2 in (12.7 mm) bare valve (without locking trigger)
Accessories	
235878	U.S. Electronic Control Replacement
235901	Metric Electronic Control Replacement
203655	Twist Lock Nozzle Replacement 1/4 npt(m)
203687	Flex Extension, hose with 203655 tip
201701	Gear Lube Extension with tip
203265	Rigid Extension with tip
Color-coded Impact Guards for Electronic Meters	
Color-code various fluids dispensed to reduce errors, match store colors, or create a customized appearance. For electronic meters only	
191782	Black
191783	Red
191784	Blue



EM12™ Electronic Meter

Dispense Meters and Control Valves

Features and Benefits

- Reset capable for periodic dispense history information and locking trigger for hands-free operation
- High-flow capability provides up to 12 gpm (45 lpm)
- Rugged design withstands demanding environments

Typical Applications

- Automotive and heavy-duty dealerships
- Service and fast lube centers
- In-plant
- Mining
- Fleet service facilities
- Lube trucks

Typical Fluids Handled*

- Petroleum- and synthetic-based oils

* Not recommended for use with anti-freeze or windshield washer fluid

Technical Specifications

Maximum Recommended Flow Rate	12 gpm (45.4 lpm)
Maximum Operating Pressure.....	1500 psi (105 bar)
Operating Temperature Range.....	-4-130° F (-20-55° C)
Storage Temperature Range.....	-40-140° F (-40-60° C)
Inlet	1/2 npt and 3/4 npt
Outlet.....	1/2 npt
Wetted Parts.....	aluminum, SST, CS, acetal, nitrile rubber, Geolast
Instruction Manual	308642

Ordering Information

EM12 Electronic Meters with 3/4 in npt(f) swivel inlet	
238636	U.S. measure, rigid extension
238637	U.S. measure, flexible extension
238638	Metric measure, rigid extension
238639	Metric measure, flexible extension
EM12 Electronic Meters with 1/2 in npt(f) swivel inlet	
238640	U.S. measure, rigid extension
238641	U.S. measure, flexible extension
238642	Metric measure, rigid extension
238643	Metric measure, flexible extension
Bare Valves with Locking Trigger (no meter or extension)	
238647	Inline flow through with 1/2 npt(f) swivel inlet and outlet
238646	Inline flow through 3/4 npt(f) swivel inlet; 1/2 npt(f) outlet
Accessories	
235878	U.S. Electronic control replacement
235901	Metric electronic control replacement
223920	High flow twist lock nozzle, 1/2 npt(f) with 1 in diameter tip
238400	Automatic nozzle 1/2 npt(f) with 1 in diameter tip
185416	Filter 40 mesh stainless steel
Color-coded Impact Guards for Electronic Meters	
For color-coding fluids dispensed to reduce errors, match store colors, or to protect vehicle's finish. For electronic meters only.	
191782	Black
191783	Red
191784	Blue



238641



238647



191782



223920

In-Line Electronic Meters

Dispense Meters and Control Valves

IM5 Low Pressure Meter

- Heavy-duty construction for outdoor use
- Easy-to-use meter dispenses pints, quarts, liters or gallons
- Compatible with windshield wash solvent or anti-freeze

247453

Typical Applications

- Automotive dealerships
- Fast lube centers
- Service shops
- In-plant

Typical Fluids Handled

- Petroleum- and synthetic-based oils
- Anti-freeze
- Windshield wash fluid

IM6 and SDI15 Medium/High Pressure Meters

- Reset capable for periodic dispense history information
- Shock-resistant durable design ideal for rugged environments
- Easy-to-use meter dispenses pints, quarts, liters or gallons

Typical Applications

- Automotive and large truck dealerships
- Fleet service facilities
- Fast lubes and service shops
- Lube trucks (IM6 only)
- Mining
- In-plant

Typical Fluids Handled*

- Petroleum- and synthetic-based oils

* Not recommended with anti-freeze or windshield wash

Technical Specifications

	IM5 In-Line Meter	IM6 In-Line Meter	SDI15 In-Line Meter
Flow Range*	0.5 to 5 gpm (1.9 to 19 lpm)	0.12 to 12.0 gpm (0.46 to 45.6 lpm)	0.1 to 14 gpm (0.4 to 53 lpm)
Max. Working Pressure	500 psi (34 bar)	1500 psi (103 bar)	1500 psi (103 bar)
Weight	1.8 lb (0.8 kg)	1.9 lb (0.95 kg)	1.8 lb (0.82 kg)
Units of Measurement	Quarts, pints, gallons, liters (factory-set to quarts)**		
Accuracy	± 0.5%	± 1.0%	± 0.5%
Inlet/Outlet	1/2 npt*	1/2 npt*	1/2 npt*
Operating Temperature Range	-4 - 122° F (-20 - 50° C)	-4° - 130° F (-20° - 55° C)	-4 - 122° F (-20 - 50° C)
Storage Temperature Range	-13 - 122° F (-25 - 50° C)	-40° - 140° F (-40° - 60° C)	-13 - 122° F (-25 - 50° C)
Outdoor	yes	yes	no
Max Totalizer	99,999	19,999	99,999
Max Recorded Dispense	999.99	999.99	999.99
Meter Pressure Loss	15 psi (1 bar) @ 5 gpm (19 lpm)	120 psi (8.3 bar) @ 6 gpm (23 lpm)	22 psi (1.5 bar) @ 14 gpm (53 lpm)
Battery	9-volt, alkaline	Lithium	2AA alkaline
Wetted Parts	nickel, zinc, zenite, nitrile rubber	aluminum, carbon steel, nitrile rubber, nickel, bronze, SST #304, cast ALNICO 8	aluminum, carbon steel, nitrile rubber, nickel, bronze, SST, Geolast
Instruction Manual	308687	307965	313048

*Tested with number 10 motor oil. Flow rates vary with fluid pressure and viscosity. ** Display shows quantity in 0.01 increments up to 999.99 gallons, quarts, pints, or liters. Totalizes in gallons or liters up to 99,999 units (IM5 only).

Ordering Information

IM5 In-Line Meter	
239824	IM5 In-Line Meter
IM6 In-Line Electronic Meter	
244075	In-Line Meter (U.S.)
244076	In-Line Meter (Metric)
235878	Replacement Electronics (U.S.)
235901	Replacement Electronics (Metric)
SDI15 In-Line Electronic Meter	
247453	In-Line Meter (U.S.)



Mechanical Meters

Dispense Meters and Control Valves

Features and Benefits

- Balanced, lightweight, rugged construction, and comfortable grip
- Non-resettable totalizing register helps manage material usage
- Handles a variety of petroleum- and synthetic-based oils and anti-freeze
- Ideal for indoor and outdoor use

Typical Applications

- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Petroleum- and synthetic-based oils and anti-freeze

Technical Specifications

Maximum Flow*	4 gpm (15.1 lpm)
Minimum Flow*	0.4 gpm (1.5 lpm)
Maximum Operating Pressure	1000 psi (68.9 bar)
Operating Temperature Range	-40-140° F (-40-60° C)
Accuracy	± 0.65%
Weight	6.0 lb (2.7 kg)
Inlet and outlet connections	1/2 npt(f)

For use with petroleum-based fluids only.

**Tested with Mobil® DTE-25 motor oil. Minimum/maximum flow rates will vary with fluid viscosity.*

Ordering Information

Manual Meters	
256556	16 Quart Meter with flexible extension and twist lock nozzle
253601	10 Liter Meter with flexible extension and twist lock nozzle
256786	16 Quart Meter with rigid extension and twist lock nozzle
256788	10 Liter Meter with rigid extension and twist lock nozzle
256787	16 Quart Meter with gear lube extension and automatic nozzle
256789	10 Liter Meter with gear lube extension and automatic nozzle
Preset Meters	
207738	60 Quart Meter valve with rigid extension and automatic nozzle
207739	60 Gallon Meter valve with rigid extension and automatic nozzle
207742	60 Liter Meter valve with rigid extension and automatic nozzle
Nozzles	
255459	Quick-close nozzle only for oil
255460	Quick-close nozzle only for anti-freeze
255470	Quick-close nozzle only for gear lube



256556



256787



256786



207738

Accessories

Dispense Meters and Control Valves

LDM and LDP Accessories

Nozzle Extension Kits	
255861	Automatic nozzle with flexible extension for oil and anti-freeze*
239949	Automatic thermal compensating nozzle with rigid extension for oil and anti-freeze
239951	Automatic thermal compensating nozzle with flexible extension for oil and anti-freeze
239950	Automatic thermal compensating nozzle with rigid extension for gear lube
239829	Automatic thermal compensating nozzle for oil and anti-freeze without extension
238371	Automatic thermal compensating gear lube nozzle without extension

*Economical extension used on model 255751

Additional LDM5 Accessories	
240416	Inlet Swivel
114017	Inlet Filter, 80 mesh
196471	Valve Bracket for Dispense Console
240453	Valve Repair Kit

Swivel Covers		Protective Boots with Trigger Guard	
191294*	Black	247759*	Black
191287	Red	243835	Red
191288	Blue	243836	Blue
191289	Green	243837	Green
191295	Yellow	247760	Yellow

*Included on meter 256215, 256216, 258693 and 258694

SDM and SDP Accessories

Nozzle Extension Replacement Kits For SD Series Meters	
255852	Automatic non-drip quick-close nozzle with rigid extension for oil
255853	Automatic non-drip quick-close nozzle with flexible extension for oil
255854	Non-drip quick-close nozzle with rigid extension for gear lube
255855	Non-drip quick-close nozzle with rigid extension for anti-freeze
255856	Non-drip quick-close nozzle with flexible extension for anti-freeze
255459	Automatic non-drip quick-close nozzle only for oil
255460	Quick-close nozzle only for anti-freeze
255470	Quick-close nozzle only for gear oil
255857	Non-drip quick-close high-flow nozzle with rigid extension for oil and anti-freeze
255858	Non-drip quick-close high-flow nozzle with flexible extension for oil and anti-freeze
255461	Quick-close high-flow nozzle only for oil and anti-freeze

Swivel Covers	
15T366	Black swivel cover (standard color with meter)
15T367	Red swivel cover
15T368	Blue swivel cover
15T369	Green swivel cover
15T370	Yellow swivel cover

Filter Kits for SD Series Meters	
255885	Filter kit includes (10) filters/strainers, (10) spacers and (10) O-rings (155332)



255861



239949



239951



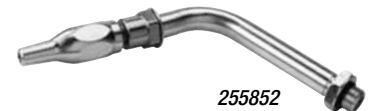
239950



247759



191294



255852



255853



255854



255857



15T366

SDV15 Control Valve

Dispense Meters and Control Valves

Features and Benefits

- Moves fluid up to 15 gpm (56.8 lpm) *(15 gpm obtained with high-flow nozzle—purchased separately)*
- Sturdy cast body designed for use in tough environments
- Lock-on trigger
- 1/2 in npt(f) inlet with built-in ball bearing swivel allows for ergonomic operation
- Inlet screen aids in keeping fluids clean

Typical Applications

- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Motor oils
- Transmission fluid
- Anti-freeze

Technical Specifications

Maximum Recommended Flow Rate	15 gpm (18.9 lpm)
Maximum Operating Pressure	1500 psi (103 bar)
Weight	0.4 lb (0.18 kg)
Operating Temperature Range	-40°–180° F (-40°–82° C)
Inlet	1/2 npt
Outlet	3/4 in, 16 straight thread O-ring boss
Wetted Parts	Aluminum, sst, cs, acetal, nitrile rubber, tpe
Warranty	Five years
Instruction Manual	312789

1. Tested in 10W oil at 70° F. Flow rates vary with fluid pressure, temperature, viscosity, inlet fitting and nozzle type.

Ordering Information

SDV15 Control Valves	
247712	1/2 in npt(f) swivel, locking open trigger, rigid extension and standard automatic non-drip quick-close nozzle for oil products
247713	1/2 in npt(f) swivel, locking open trigger, flexible extension and standard automatic non-drip quick-close nozzle for oil products
247714	1/2 in npt(f) swivel locking open trigger, gear lube extension and standard quick-close nozzle
247715	1/2 in npt(f) swivel locking open trigger, rigid extension and standard quick-close nozzle for anti-freeze
247716	1/2 in npt(f) swivel locking open trigger, flexible extension and standard quick-close nozzle for anti-freeze
Bare Valve (no extension)	
247717	1/2 in npt(f) swivel locking open trigger, 3/4 in - 16(f) straight thread O-ring boss outlet, and trigger lock, no extension
Accessories	
256164	Filter kit includes (10) filters/strainers (185416)
255459	Quick-close nozzle only for oil
255460	Quick-close nozzle only for anti-freeze
255470	Quick-close nozzle only for gear lube
255857	Non-drip quick-close high-flow nozzle with rigid extension for oil and anti-freeze
255858	Non-drip quick-close high-flow nozzle with flexible extension for oil and anti-freeze
255461	Quick-close high-flow nozzle only for oil and anti-freeze



247712

XDV20 Control Valve

Dispense Meters and Control Valves

Features and Benefits

- Moves fluid up to 20 gpm (76 lpm)
- Lock-on/lock-off trigger for hands-free operation
- Rugged cast-body design withstands harsh environments
- Built-in ball bearing swivel allows for ergonomic operation
- Inlet screen aids in keeping fluids clean
- Quick close high flow nozzle for high volume dispensing—moves fluids fast!

Typical Applications

- High-flow, non-metered oil dispense
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Motor oils
- Transmission fluid
- Anti-freeze

Technical Specifications

Maximum Recommended Flow Rate	20 gpm (45.4 lpm)
Maximum Operating Pressure.....	1500 psi (105 bar)
Assembly Weight (no meter)	0.4 lb (0.18 kg)
Operating Temperature Range.....	-40°–180° F (-40–82° C)
Inlet	1/2 npt and 3/4 npt
Outlet.....	7/8-14 straight thread o-ring boss
Wetted Parts.....	aluminum, SST, CS, acetal, nitrile rubber, Geolast
Instruction Manual	308642

Ordering Information

XDV20 Control Valves	
247718	1/2 npt(f) swivel inlet, 1/2 in (12.7 mm); rigid extension, high flow, quick-close nozzle
247721	1/2 npt(f) swivel inlet, 1/2 in (12.7 mm); flexible extension, high flow, quick-close nozzle
247722	3/4 npt(f) swivel inlet, 1/2 in (12.7 mm); rigid extension, high flow, quick-close nozzle
247723	3/4 npt(f) swivel inlet, 1/2 in (12.7 mm); flexible extension, high flow, quick-close nozzle
Bare Valves (no extension)	
247724	Has locking trigger and in-line flow through 1/2 npt(f) swivel inlet; 7/8-14 straight thread O-ring boss outlet
247725	Has locking trigger and in-line flow through 3/4 npt(f) swivel inlet; 7/8-14 straight thread O-ring boss outlet
Accessories	
255793	Quick-close high flow nozzle for oil, ATF and anti-freeze; 7/8-14 straight thread O-ring boss inlet (XDV20 only)
255859	Flex extension with quick-close nozzle (255793) for XDV20
255921	Rigid extension with quick-close nozzle (255793) for XDV20



247722



247724

Grease Dispense Valves

Dispense Meters and Control Valves

Pro Shot™ Non-Metered Grease Valves

- Rugged design for harsh environments
- Pressure-assisted trigger for ease of operation
- Easy top adjustment with locking nut
- Pro-Shot adjustment nut protected by rigid guard

Typical Applications

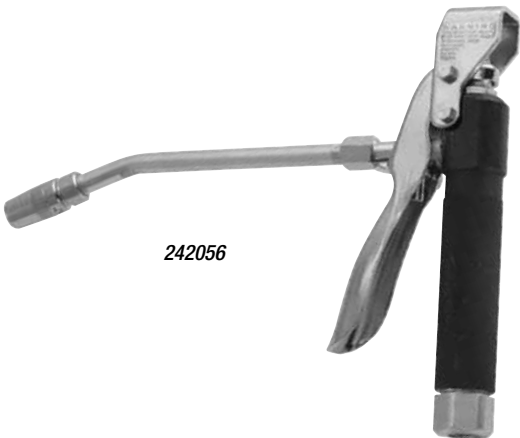
- Service shops
- Heavy-duty dealerships
- Fast lube centers
- Automotive dealerships
- In-plant
- Lube trucks
- Mining

Typical Fluids Handled

- Grease up to NLGI #2

Ordering Information

Pro-Shot Grease Dispense Valve	
242056	1/4 npt(f) inlet with coupler and extension 200389
242055	1/4 npt(f) inlet without coupler or extension
242058	3/8 npt(f) inlet with coupler and extension 200389
242057	3/8 npt(f) inlet without coupler or extension
224872	Includes 30 in (76.2 cm) whip hose (109148), Z-Swivel (202577) and grease valve (242056)



Accu-Shot™ Metered Grease Valves

- Accurate grease metering within $\pm 3\%$
- Easy-to-read LCD display
- Handles pressure up to 5000 psi (345 bar) and flow up to 36 oz/min (1 kg/min)

Typical Applications

- Lube trucks
- Heavy-duty dealerships
- In-plant
- Fleet service facilities
- Mining

Typical Fluids Handled

- Grease up to NLGI #2

Ordering Information

Accu-Shot Electronic Metered Grease Valve	
233807	U.S. Measurement, includes extension and hydraulic coupler
233933	Metric Measurement, includes extension and hydraulic coupler



Horizon™

Fluid Management Systems

Features and Benefits

- Allows multiple technicians to dispense simultaneously
- Easily configured and expandable for any facility
- Increases technician productivity
- Password-protected to prevent unauthorized dispensing
- Tracks inventory levels and alerts operators to low inventory conditions to minimize out-of-stock situations

Typical Applications

- Bulk-dispensing to multiple service bays
- Automotive dealerships
- Heavy-duty dealerships
- Fleet service facilities

Typical Fluids Handled

- Petroleum- and synthetic-based oils
- Anti-freeze

Technical Specifications

System Specifications

Control Modules on a System (1 Master only, plus 39 Slaves)	40 maximum
Keypads on a System (1 keypad per Control Module)	40 maximum
Solenoids on a System (40 Control Modules, 6 ports each)	240 maximum
Meters on a System (40 Control Modules, 6 ports each)	240 maximum
Fluids on a System	10 maximum
Dispense Areas (reel banks)	99 maximum
Operator Names / PIN Numbers	100 maximum
Dispense Records Stored	668 maximum
Simultaneous Dispenses (same and/or different fluids)	12 maximum
Jobs Waiting in Queue	12 maximum
Printer per System OR Attached Computer per System	1 maximum
(either must be connected to Master Control Module)	
Accuracy of System	±0.6%

Control Module Ports

Solenoid Ports (air or fluid) per Control Module	6
Pulse Meter Ports per Control Module	6
Port for Keypad per Control Module	1
Port for Printer or Computer per Master Control Module	1

Voltage Input

90-120 Volts AC, 50/60 Hz, single phase, 2 amps maximum draw	
208-240 Volts AC, 50/60 Hz, single phase, 1 amp maximum draw	
Operating Temperature Range	40 - 140° F (4 - 60° C) ambient
Pre-set or Free-flow Options	

Maximum Preset or Free-Flow Dispense	999.9 units
Minimum Preset Dispense	0.5 units

Units of Measure

Dispense	liters, quarts, gallons or pints (configurable for each fluid)
Inventory	liters or gallons (dependent upon dispense units chosen)

Maximum Cable Lengths

From Keypad to Control Module	50 ft (15.3 m)
From Solenoid to Control Module	50 ft (15.3 m)
From Pulse Meter to Control Module	50 ft (15.3 m)
From Printer/Computer to Master Control Module	50 ft (15.3 m)
From one end of the Control Module Network to the other end (daisy-chained)	2000 ft (610 m)

Reference Data

Instruction Manual	308607
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Horizon™

Fluid Management Systems

Ordering Information

Control Module drives air and fluid solenoids, and counts pulses from meters. On-board memory contains a map of available system resources, and a power supply that supports both 120 and 240 Volt AC operation. Combine one Master Control Module with up to 39 Slave Control Modules per system

238624 Master Control Module (one per system)

238625 Slave Control Module (up to 39 per system)

Keypads: Basic, Enhanced and Administrative

113551 Basic Keypad for navigating through the Horizon's menus

113553 Administrative Keypad is needed to set up and make changes to the system parameters

191368 Keypad Wall-Mounting Bracket

Air Solenoids open and close the air supply to the fluid pump air motor. Each solenoid can be up to 50 ft (15.3 m) from a Control Module. Up to 6 solenoids (air or fluid) can be connected to each Control Module

215407 For pumps requiring normal air flow (Mini Fire-Ball 225, 3:1 and Fire-Ball 300, 5:1)

512926 For pumps requiring higher air flow (Fire-Ball 425, 6:1 and 3:1)

Fluid Solenoids start and stop the fluid dispense cycles. These must be placed at each dispense point for each fluid being dispensed. Each fluid solenoid can be up to 50 ft (15.3 m) from a control module. Up to 6 solenoids (either air or fluid) can be connected to each control module. The low-flow model is available in a kit with a ready light which alerts the operator when the job is ready to dispense

215487 Low-flow: supports 3 gpm (11.4 lpm)

512927 Higher-flow: supports up to 6 gpm (22.7 lpm)

514150 Anti-Freeze Solenoid

218588 Low-flow Solenoid with Ready Light Kit

238996 Ready Light Kit (only; less the solenoid)

Pulse Meters measure fluid flow to dispense points and send a train of pulses back to the Control Modules which are counted to determine how much fluid has been dispensed. If there are multiple meters for a single fluid, check valves (111620) should be placed in series with each meter to prevent "cross talk" and oscillations. Pulse Meters can be used for either U.S. or metric units

238618 For oils, gear lube, automatic transmission fluid

215474 For anti-freeze

111620 Check Valve, 1/2 in

Thermal Relief Kits

235998 600 psi (41 bar)

102527 Thermal Relief Valve, 900 psi (62 bar)

237893 900 psi (62 bar)

240429 1600 psi (110 bar)

System Printer prints job tickets after each dispense is complete, plus has save function for later analysis

113774 Printer

514037 Printer paper, 1 roll

Keypad or Printer Cables

191393 25 Ft (7.6 M) cable with connectors

191394 Cable with connectors. 50 Ft (15.3 M)

Control Module Network

113559 500 Ft (152.5 M) bulk cable

113560 1000 Ft (305 m) bulk cable

Pulse Meter Cable

113555 Length: 500 ft (152.5 m)

113556 Length: 1000 ft (305 m)

Solenoids Cable

113557 Length: 500 ft (152.5 m)

113558 Length: 1000 ft (305 m)

Computer Cable with Connectors

192873 Computer I/O 25 ft (7.6 m)

192874 Computer I/O 50 ft (15.3 m)

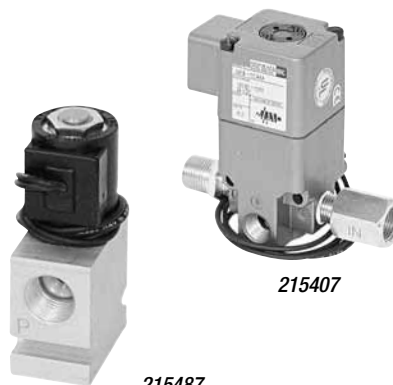


238624



113553

113551



215487

215407



113774



238618

Fluid Commander™

Fluid Management Systems

Features and Benefits

- Provides increased accuracy over mechanical counters
- PIN code prevents unauthorized dispensing
- Dispense totals tracked by location
- Easy to read display
- Accurate controlled dispense with parts room authorization

Typical Applications

- Parts room authorized dispensing for inventory control
- Automotive dealerships
- Heavy-duty dealerships
- Fleet service facilities

Typical Fluids Handled

- Petroleum- and synthetic-based oils
- Anti-freeze

Easy to Use

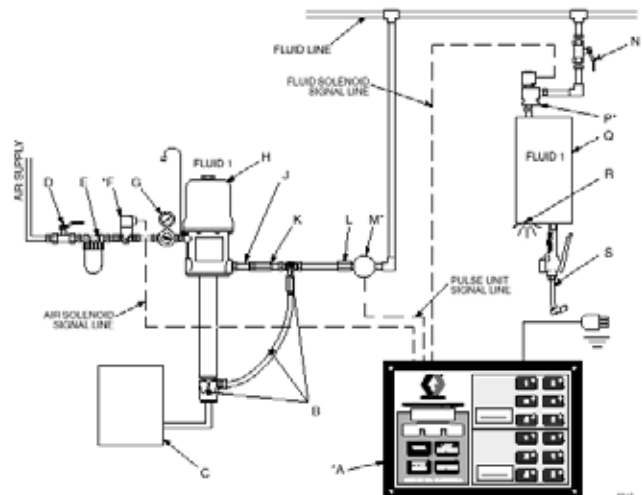
1. Service technician enters the service bay number, type of product, and amount to be dispensed, then activates the dispense button.
2. A “ready” light (located on the hose reel or dispense bar of the target service bay) signals when dispensing can begin.
3. As fluid is dispensed, the Fluid Commander tallies the amount dispensed and shuts-off when the pre-set amount is reached. No further dispensing takes place until new dispensing data is entered.

Technical Specifications

Maximum Number of Fluids.....	1 or 2
Dispense Stations/Bays.....	6 or 12
Air Solenoids Required.....	1 (per pump)
Fluid Solenoids Required.....	1 (per fluid dispense station)
Electrical Requirements.....	120 V, 60 Hz, .25 amps
Weight.....	4 lb, 5 oz. (8.0 kg)
Wiring Requirements.....	90V; 2-wire
Distance/Gauge.....200 ft (61 m) =	18 gauge, 201 to 500 ft (61 m to 152 m) = 16 gauge,
.....501 ft (152 m) or more =	14 gauge
Instruction Manual.....	308238



Typical Fluid Commander System Layout



KEY

- A. Control*
- B. Pressure Relief Kit, 237893, 1-1/2 npt (m x f)
- C. Supply Tank
- D. Air Shutoff Valve, bleed-type
- E. Air Filter
- F. Air Solenoid Valve*, 215407
- G. Air Regulator, 202156
- H. Pump
- J. Flexible Hose, 3-6 ft (0.9-1.8 m) long
- K. Check Valve*, 111620 (required)
- L. Fluid Filter, 223179
- M. Pulse Meter*, 236763 or 236764
- N. Fluid Shutoff Valve, 108458, 1/2"
- P. Fluid Solenoid Valve*, 215487
- Q. Hose Reel
- R. Ready Light, 238996
- S. Dispense Valve

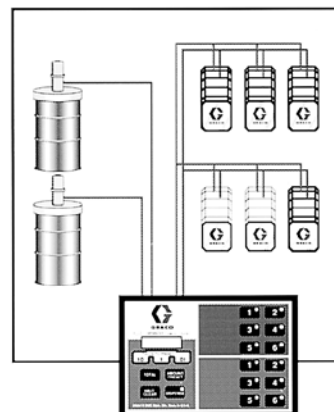
* These parts are included with Model 232076, 240448, or 241905.

Fluid Management Systems

Fluid Commander™

Ordering Information

Fluid Commander Systems	
232076	U.S. Measure Fluid Commander System for 2 products and 6 stations. Includes: One 2-product/6-station Fluid Commander (235532), oil meter (236763), fluid solenoid valve (215487), air solenoid valve (215407), Check valve (111620)
240448	Metric Measure Fluid Commander System for 2 products and 6 stations. Includes: One 2-product/6-station Fluid Commander (232077), oil meter (236764), Fluid Solenoid valve (215487), Air Solenoid valve (215407), check valve (111620)
Accessories	
111620	Check valve
236763	Electronic Pulse Meter (quarts)
236764	Electronic Pulse Meter (liters)
215474	Mechanical Pulse Meter (quarts)
215745	Mechanical Pulse Meter (liters)
244342	Meter Pulse Converter, used when upgrading old-style modular fluid commander to electronic allows use of 215474/215475 with the EFC. Instruction manual 309276
Air Solenoid Valves	
215407	Air Solenoid Valve, 150 psi (10 bar) (1/2 npsm(f) conduit ports for wiring; 1/4 npt(f) air ports, adapted to 3/8(f) IN, 3/8(m) OUT) operates on 24V DC and 110 VAC. Automatically shuts-off air inlet to pump when pre-set dispensed amount is reached. Materials of construction: brass, SST, Buna
105474	Air Solenoid Valve (bare) 150 psi (10 bar), same as 215407 but without wire connectors or adapters. 1/2 npsm(f) conduit ports for wiring; 1/4 npt(f) air ports. 150 psi (10.3 bar) max. working pressure
Fluid Solenoid Valves	
215487	Fluid Solenoid Valve, 1/2 npt(f) 3000 psi (207 bar) operates on 24V DC. Automatically shuts-off fluid when pre-set dispensed amount is reached. Includes tube, valve, pin connector, wire plug connector and adapter
514150	Fluid Solenoid Valve for anti-freeze, 150 psi max. (10 bar), 1/2 npt(f), same as features as 215487
110025	Bare Fluid Solenoid Valve, 1/2 npt(f) 3000 psi, same features as 215487 above, but without wiring connectors or adapters
Ready-Light Kits	
218588	Ready-Light Kit, signals operator when dispensing can begin. Includes "ready to dispense" Indicator Light (239019), Strainer (240417), Fluid Solenoid Valve (215487) and hardware. Manual 307696
238996	Ready-Light with Junction Box (no solenoid or strainer)
239019	Ready-to-Dispense Indicator Light only
113859	Lamp for Indicator Only
Installation Components	
223179	Fluid Filter Kit (for bare electronic meter)
186472	Wall-Mounting Bracket
108458	Fluid Shut-Off Valve
237893	Thermal Relief Kit for 900 psi (62 bar), relieves excess heat-induced pressure from dispense system. Male and female ends allow for simple installation. Instruction manual 308403
Connecting Cables for Connecting Solenoids and Consoles, 90-volt, 2-wire, 18-gauge	
215481	100 ft (30.5 m) pre-connected at both ends



215407



215487



215481

Manually Operated Grease Guns

Grease Guns, Accessories and Fittings

Ordering Information

Grease Guns	
202600	1/8 npt(f) Power-Shot Booster Gun boosts incoming pressure up to 18,000 psi (1,242 bar). Use with any high-pressure lubricator. Maximum inlet pressure: 5000 psi (345 bar). Includes nozzle (200389). (Hose swivel 202579 must be ordered separately). Instruction Manual: 306271
110218	Standard Lever-Action Grease Gun: Develops up to 6000 psi (400 bar) working pressure and pumps 1.8 oz (51 g) per 40 strokes. Can be loaded via cartridge or bulk fill. Optional loader fitting available. Equipped with rigid extension and hydraulic coupler
110216	Heavy-Duty Lever-Action Grease Gun with high-pressure variable low-volume. Three-way loading: bulk fill, loader fitting or 14 oz cartridge. Pumps 1.24 oz per 40 strokes. Includes air bleeder valve. Equipped with rigid extension and hydraulic coupler (M IL-G-3859). Can develop up to 10,000 psi (690 bar). Comes with 236171, easy fill valve
110203	Pistol-Matic Grease Gun with three-way loading: bulk fill, loader fitting or cartridge. Pumps .72 oz (28.4 g) per 40 strokes. Includes air bleeder valve. Equipped with rigid extension and hydraulic coupler. Can develop up to 3500 psi (241 bar)
203697	1/8 npt(f) Hot-Shot Portable Booster Gun for portable operation without continuous connection to grease supply. Has 4 oz (113 g) grease reservoir in handle capable of servicing up to 100 fittings before needing a refill. Has grease fitting for recharging from either manual or air-powered luber. Single-hand operation squeeze handle develops up to 10,000 psi (690 bar). Includes grease extension and nozzle 200389. Instruction Manual: 306460
110202	Pistol-Matic Grease Gun is the same as 110203 but with 12 in (30.4 cm) flexible rubber hose and hydraulic coupler
112196	1/4 npt Pistol-Style Air-Operated Grease Gun is a spring-primed, single-shot gun. Three-way loading: bulk fill, loader fitting or 14 oz (400 g) cartridge. Air input range of 75 to 100 psi (5 to 7 bar); working pressure of 6000 psi (414 bar). Pumps 1.2 oz (34 g) per 40 pulls at 100 psi (7 bar). Includes standard gun coupler and bleeder valve, 1/8 in-27 NPT rigid extension. (1/4 npt air input connection)
110201	Suction Gun for evacuating and filling fluids into gear housings, differentials, transmissions and related applications. Holds 1 pint (16 oz/473 cc), comes with red clear plastic 12 in (30.4 cm) hose
Z-Swivels	
202579	1/8 npt(m) x 1/4 npt(f) free-ball bearing
202577	1/4 npt(m) x 1/4 npt(f) free-ball bearing use with dispense valve 242055 and 242056
224569	3/8 npt(m) x 3/8 npt(f) free-ball bearing use with dispense valve 242057 and 242058
207948	1/2 npt(m) x 1/2 npt(f) free-ball bearing
Straight Swivels	
204082	1/8 npt(m) x 1/8 npt(f) 8000 psi (550 bar) free-ball bearing
204083	1/4 npt(m) x 1/8 npt(f) 8000 psi (550 bar) free-ball bearing
204084	1/4 npt(m) x 1/4 npt(f) 8000 psi (550 bar) free-ball bearing
214925	3/8 npt(f) x 1/4 npsm(f-union) 5000 psi (345 bar)
214926	3/8 npt(f) x 1/2 npsm(f-union) 5000 psi (345 bar)
207946	3/8 npt(f) x 1/2 npsm(f-union) 5000 psi (345 bar)
207947	1/2 npt(m) x 1/2 npt(f) 6000 psi (414 bar)
360° Swivels	
Swivels and locks into full 360° angle. Use for maximum coupler adaptability and reach	
203597	360° Grease Swivel with tapered-nose coupler (200325)
203198	360° Grease Swivel, 8,000 psi (552 bar) maximum working pressure (without coupler)



Manually Operated Grease Guns

Grease Guns, Accessories and Fittings

Grease Nozzles	
200389	Standard nozzle. Includes straight 6 in (15.2 cm), 1/8 npt(m) extension tube (197471) and tapered nose coupler (200325)
204072	Swivel nozzle. Includes straight 6 in (15.2 cm), 1/8 npt(m) extension tube (197471) and tapered nose coupler (200325). Coupler has 360° swivel adapter (203198) for added convenience
204897	Swivel nozzle. Includes straight 12 in (30.4 cm), 1/8 npt(m) extension tube (155836) and tapered nose coupler (200325). Coupler has 360° swivel adapter (203198) for added convenience
204204*	Flexible 12 in (30.4 cm) hose nozzle. 1/8 npt(m) includes tapered-nose coupler (200325)
203504*	Flexible 12 in (30.4 cm) hose nozzle. 1/8 npt(m) includes tapered-nose coupler (200325) and lock sleeve connector (203497) for quick connection to any grease nozzle having tapered-nose coupler
109145	12 in (30.4 cm) hose nozzle without coupler
112255	18 in (45.8 cm) hose nozzle without coupler
109148*	30 in (76.2 cm) hose nozzle without coupler, has 1/8 npt(m) both ends. Use as alternate for rigid nozzle with tapered-nose coupler 200325

*Warning: potential injection hazard. Not for use above 5000 psi (345 bar).

Grease Couplers	
200325	1/8 npt(f) inlet standard tapered-nose coupler. Hardened jaws grip grease fittings through wide-sealing angle, but release easily. Maximum working pressure 8000 psi (551 bar)
202650	1/8 npt(f) inlet standard straight nose grease coupler for manual operated grease guns only. Maximum working pressure 3000 psi (206 bar)
200020	1/8 npt(f) inlet standard button-head coupler. Gives fast, positive seal on button-head fittings
200021	1/8 npt(f) inlet giant button-head coupler. Gives fast, positive seal on larger button-head fittings

Adapters have lock-sleeve quick-connector, works with any grease nozzle with a tapered-nose coupler	
201881	Hydraulic-to-push adapter. Used for U-joints and low-pressure service
205532	Hydraulic-to-steel needle adapter. Used for flush fittings. 250 psi (17 bar) max, not for air grease applications or guns
205582	Hydraulic-to-nylon needle adapter. Used for removable plugs. 250 psi (17 bar) max, not for air grease applications or guns
223187	90° hydraulic-to-push adapter (K-car). Refer to instruction manual 306708
203497	Lock sleeve connector. 1/8 npt(f) outlet. Allows for quick connection to tapered-nose coupler. Inlet is standard grease fitting with sleeve to lock connector in place
236171	Easy-fill valve. For faster loading of graco hand grease guns with gun loaders. Replaces hydraulic fittings on all grease guns with 1/8 npt(f)
204929	Grease loader valve. For use with lever-operated, high-volume grease pumps. Permits quick bulk-filling of hand-operated grease lever guns equipped with easy-fill valve 236171
205592	Hydraulic adapter assortment package. Contains needle adapter (205568), plug adapter (205554), push adapter (201881), nylon needle adapter (205582), hydraulic-to-steel needle adapter (205532) and whip hose nozzle connector (203504)

Grease Gun Fittings

1/8 npt Threaded Grease Fittings (steel; ball-check)			
Part No.	Shank	Description	Pressure Rating
100054	9/32	1/8 npt straight	10,000 psi (690 bar)
101277	1-9/32	1/8 npt straight	
100970	9/32	1/8 npt 30° angle	
100834	9/32	1/8 npt 45° angle	
100971	9/32	1/8 npt 65° angle	
100833	9/32	1/8 npt 90° angle	



Manually Operated Grease Guns

Grease Guns, Accessories and Fittings

1/4 npt Threaded Grease Fittings (steel; ball-check)			
100848	3/8	1/4 npt 67° angle	10,000 psi (690 bar)
100846	3/16	1/4-28 straight	
100847	13/64	1/4-28 45° angle	
101283	3/16	1/4-28 90° angle	
101281	11/32	1/4-28 straight	
110702	19/64	1/4-28 65° angle	
100835	12/32	1/4-28 straight	
1/4 npt Thread-Forming Grease Fittings (steel; ball-check)			
110703	13/64	1/4-28 straight	10,000 psi (690 bar)
110705	13/64	1/4-28 90° angle	
3/16 npt Thread-Forming Grease Fittings (steel; ball-check)			
110706	3/32	3/16 npt straight	10,000 psi (690 bar)
110709	7/32	3/16 npt 65° angle	
Drive-Type Grease Fittings (steel; no check)			
110713	1/4	3/16 npt straight	
101312	1/4	3/16 npt straight	
110710	1/4	5/16 npt straight	
101287	17/64	1/4 npt straight	
Standard Button-Head Grease Fitting (steel)			
100837	7/16	1/4 npt straight	
101297	33/64	3/8 npt straight	
110711	35/64	1/2 npt straight	
Giant Button-Head Grease Fitting (steel)			
110712	9/16	3/8 npt straight	
100854	1/2	1/4 npt straight	
Grease Accessory Packages			
202654	Convenient Storage Box Contains the following threaded fittings in the quantity listed:		
Shank	Description	Grease Fitting No.	Quantity
9/32	1/8 npt straight	100054	30
9/32	1/8 npt 30° angle	100970	10
9/32	1/8 npt 90° angle	100833	10
3/16	1/4-28 straight	100846	20
13/64	1/4-28 45° angle	100847	10
Easy-Outs			
101604	1/8 npt		
101605	1/4-28 unf		



101287



100834



101297



110712



202654



101605



101604

Oil King,™ Coolant King™ and Oil Ace™

Fluid Reclaim Packages and Accessories

Oil King and Coolant King

- Large 25 gallon capacity with sight gauge
- Convenient tool trays and filter areas
- Large offset collection pan with screen
- Oversized tires to get over hose and rough floors
- Color specific receiver for easy identification

Typical Applications

- Used fluid receiver
- Automotive dealerships
- Heavy-duty dealerships
- Fast lube centers
- Fleet service facilities
- Service shops

Typical Fluids Handled

- Used oil—Oil King
- Used antifreeze—Coolant King

Ordering Information

Oil King Oil Receiver	
238866	25 gal (95 l) Polyethylene tank with used-filter tray, tool holders and sight gauge. Includes all hardware for topside evacuation or bottom drain*. Instruction manual 308667
Coolant King Anti-Freeze Receiver	
248632	25 gal (95 l) Polyethylene tank with used-filter tray, tool holders and sight gauge. Includes all hardware for topside evacuation or bottom drain*

* Must use 224873 for topside evacuation. Must ship via truck.

Oil Ace

- Easy to drain using shop air pressure
- Large 24 gallon capacity
- Large offset collection pan with screen

Typical Applications

- Pressurized used oil receiver
- Automotive dealerships
- Heavy-duty dealerships
- Service shops
- Fast lube centers
- Fleet service facilities

Typical Fluids Handled

- Used oil

Ordering Information

Oil Ace	
119577	24 gal (90 l) Steel-tank Pressurized Oil Drain



248632



238866



Oil Receivers and Drains

Fluid Reclaim Packages and Accessories

Ordering Information

16 gal (60 l) Used-Oil Receiver with drum	
239301	Use with evacuation kit 240832. Instruction manual 306449
16 gal (60 l) Used-Oil Receiver without drum	
239302	Instruction manual 306449
Funnel Kit	
243650	Use with 238866, 239301, 239302 and 248632. Includes tray and pipe
Wall-Mounted Funnel Drain	
154616	Use with Pedestal Receiver 225272 to open automatic check-valve and drain used oil through wall to waste tank. Drain has 1-1/4 npt(f) outlet
Drum-Mounted Funnel Drain	
156789	Use with Pedestal Receiver (225272) to open automatic check-valve and drain used oil into standard drum. Funnel drain has 2 npt bung fitting for use with 55 gal (210 l) or 16 gal (60 l) drums, or 275 gallon (1,100 l) tanks
ATF Drain Funnel	
208009	Use with Pedestal Receiver (225272) to extend funnel reach. Use for draining transmissions. (Not equipped with drain plug.) 16 in x 24 1/2 in
Rolling Used-Oil Receiver	
218969	Specially designed for car and truck fast-lube facilities where speed and mobility are important. Adjustable steel rollers fit track widths of 39 in (99 cm) to 46 inches (117 cm), with a minimum running width of 2-1/2 in (63.5 mm). Front and rear drain fittings allow use of two drains on a single track, permitting two receivers to be drained simultaneously. Instruction manual 307727. Unit includes 30 gal (114 l) steel tank, 1-1/2 npt drain valve (108204), 1-1/2 npt quick coupler (108202) and 1-1/2 npt coupler cap. Dimensions: 24 in (61 cm) wide; 33 in (84 cm) long; 11 in (28 cm) deep; 3 in (7.6 cm) diameter wheels. 1-1/2 in drain hose—see manual provided
Narrow Rolling Used-Oil Receiver	
235346	Same as 218969 above, except track width range is from 34.2 in (87 cm) to 42.2 in (108 cm). 27 gal (102 l) capacity. Instruction manual 307727. See accessories on page 101
Big Hauler™ Truck Drain	
244055	Specially-designed for truck maintenance facilities, the Big Hauler Truck Drain boasts a large capacity and easy maneuverability. Dimensions: 42 in (106.7 cm) long; 30 in (76.2 cm) wide; 9 in (22.9 cm) deep. Capacity: 26 gallons (98 l). Instruction manual 309194. Gravity drain valve at bottom of unit allows for easy drain access. 3/4 in npt outlet can also be used with 224873 for diaphragm pump evacuation. 240832 can be ordered separately for existing diaphragm pump evacuation systems. Instruction manual 308719



239301



244055



208009



218969

Oil Evacuation

Fluid Reclaim Packages and Accessories

Packages for Used-Oil Evacuation with Air-Operated Diaphragm Pumps

Wall-Mounted Packages	
24E166	Includes: 1050A (1 in) diaphragm pump (647016), wall bracket (189233), air installation kits (240684), fluid installation kits (240685), drum style adapter kits (240832) <i>NOTE: Used-oil receivers are not included and must be ordered separately. See instruction manual 313597 for more information.</i>
224873	Includes: 716 (3/4 in) diaphragm pump (241906), wall bracket (224835), air installation kits, fluid installation kits (240685), drum style adapter kits (240832) <i>NOTE: Used-oil receivers are not included and must be ordered separately.</i>

Stationary Gear-Oil Evacuation Systems with 716 or 1050 Diaphragm Pump

System evacuates lube from differential case using suction generated by a diaphragm pump. Nylon tubes ranging in size from 3/16 in OD to 1/2 in OD are included to fit through sight plug to completely drain the case. Evacuated gear lube is then pumped to waste tank. Piping and waste tank not included. Systems are fully-groundable and bondable for safe transfer of used oil

224955	Includes: 716 diaphragm pump (241906), air control kit (110149), mounting kit (224759), swivel union (157785), hose coupler (111474), suction hose/wand** (221146) and control valve** (220969) <i>**Order additional suction hose/wand (221146) and additional control valve (220969) for each additional suction point.</i> <i>Note: Order grounding clamp (222011) or use locally-supplied grounding wires and clamps in accordance with applicable codes.</i>
24E167	Includes: UL-listed 1050A diaphragm pump (647016), air control kit, hose and fitting kit (222149), evacuation, suction hose/wand** (221146) and wall bracket (189233) <i>**Order additional suction hose/wand 221146 and additional control valve 220969 for each additional suction point.</i> <i>Note: Order grounding clamp 222011 or use locally-supplied grounding wires and clamps in accordance with applicable codes. See instruction manual 313597 for more information.</i>

Port-Evacuation Pump

223695	Port-Evacuation allows fast, clean withdrawal of gear lube, ATF, anti-freeze, and related fluids. Includes: 716 diaphragm pump (241906), mounting kit with 10 ft (3 m) suction hose (223697) which attaches to wands of four different diameters (suction wand kit, 223696): 1/2 in (12.7 mm); 3/8 in (9.5 mm); 1/4 in (6.4 mm), and 3/16 in (4.7 mm). Instruction manual 308035
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Suction Wand Kits

223696	15 in (38.1 cm)
224762	48 in (121.9 cm)
223696	15 in (38.1 cm)
224762	48 in (121.9 cm)

Used-Oil Handling Accessories

Tandem Drain Kit	
218970	Tandem drain kit connects two rolling receivers for flow-through draining operation. Kit includes connector hose, shut-off valve, pipe nipple, and quick-connect nipple. Instruction manual 307727
108491	Drain hose kit allows rolling used-oil receiver to be drained directly into the used-oil line. Kit is 24 in (0.6 m) in length with camlock coupler on one end

Swing-Arm Drain Kit

221007	Used for servicing single rolling used-oil receiver (218969). When used with tandem drain kit (218970) it can service two receivers on a single track. Kit includes swivel elbow (108867), connector hose, dust cap (108203) and male adapter (108202)
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Oil Tank Monitor

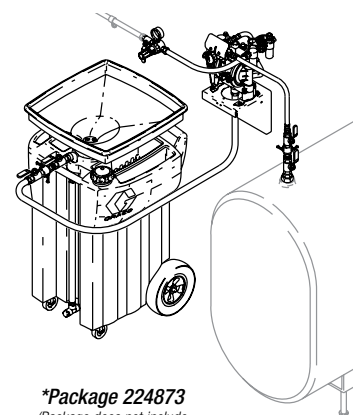
116229	Shuts off air to the pump when tank is full. Mounted at either end of fast lube service pit, swing-arm drain stores against pit wall and is rotated into position for use
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Accessories for Port-Evac Pump (223695)

223888	6 ft (1.8 m) suction hose for ATF and anti-freeze. Includes filter screen
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Fluid Reclaim Accessories

243167	U-tube for used-oil drain cart evacuation system. 1/2 npt (mbe)
222011	Grounding clamp for all used-oil handling systems includes 25 ft (7.6 m) grounding wire



***Package 224873**

(Package does not include 238866 receiver or tank)



218970



116229



223888

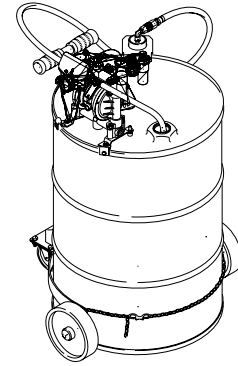
Oil Evacuation

Fluid Reclaim Packages and Accessories

Fas-Vac Evacuation Systems

224667*	Fas-vac evacuation system (without drum) basic system includes 716 diaphragm pump and mounting hardware. Instruction manual 308154
224700*	16 gallon (60 l) system includes pump (224667), dolly (224665), wand storage kit (224666), evacuation hose (224669) and 16 gallon (60 l) drum (111468). Instruction manual 308154
224701*	55 gallon (200 l) system (without drum) includes pump (224667), 55 gallon (200 l) drum truck (111470), wand storage kit (224666) and evacuation hose (224702). Instruction manual 308154
187359	4-way valve 1/2 npt(f) ports

*224759 FLR mounting kit and 110149 FRL must be ordered separately. See instruction manual 308163.



224701

Hoses, Fittings and Accessories

Air Filters

Centrifugal action 1/4, 3/8 and 1/2 npt. (with 20 micron filters); 3/4 npt having 40 micron filters to remove water and foreign particles from air supply

110146	1/4 npt(fbe)	106148	3/8 npt(fbe)
106149	1/2 npt(fbe)	106150	3/4 npt(fbe)

Automatic Filter Drain

106151	Float-type drain for automatic emptying of accumulated fluid in a filter assembly. 1/4 npt(m) (does not fit air filter 110146)
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Air Regulators

Provides precision control of outlet air pressure. Feedback principle provides constant pressure to pump regardless of air demand rate and fluctuations in supply pressure. (Additional fittings required except air regulators with installation kits.)

110318	1/4 npt(fbe)
110147	1/4 npt(fbe) with gauge
110234	3/8 npt(fbe)
109075	3/8 npt(fbe) with gauge
202858	3/8 npt(m) x 1/2 npsm(f) with gauge
104266	1/2 npt(fbe)
244844	1/2 npt(fbe) with gauge
207755	3/4 npt(fbe)
244845	3/4 npt(fbe) with gauge

Installation Kits

Installation kits include: shut-off valve, regulators, gauges and fittings as necessary for normal installation

218316	Installation kits for Fast-Flo, Fire-Ball, or Husky 307 and 716 diaphragm pumps
224512	Installation kits for Mini Fire-Ball 225 and Fire-Ball

Air Lubricators

Extends pump life and smooths pump movement by applying measured lubricant to all moving parts within the pump air motor. Control knob and sight window allow adjustment of dispensed lubricant

214848	1/2 npt(fbe)
110148	1/4 npt(fbe)
214847	3/8 npt(fbe)
214849	3/4 npt(fbe)



106148



106151



109075



224512



214847

Accessories

Hoses and Fittings

FRL Combination Units

Each includes filter, regulator, pressure gauge, lubricator and connection fittings

110149	1/4 npt (fbe)
110150	3/8 npt (fbe)
217072	1/2 npt (fbe)
217073	3/4 npt (fbe)



110150

Bleed-type Air Shut-off Valves

Closes air inlet to pump and relieves trapped air pressure down line from valve. Recommended for each pump drop line. Note: Be certain to install correctly; if installed backwards air will constantly escape from the valve

110223	1/4 npt(fbe)
110224	3/8 npt(fbe)
110225	1/2 npt(fbe)
110226	3/4 npt(fbe)
107142	1/2 npt(mxf)
107141	3/4 npt(mxf)



106151



110223



107142

Air Line Shut-off Valves Ball valve-type air line shut-off valve; non-pressure relieving

208390	1/4 npt(mbe)
208393	3/8 npt(mbe)
208630	1/2 npt(m) x 3/8 npt(f)
109077	3/4 npt(fbe)
118464	1 npt(fbe)



208536

Quick-Connect Coupler

Permits quick, convenient attachment of air supply hoses

208536	1/4 npt(fbe)
110198	3/8 npt(f)
110199	1/2 npt(f)
110200	3/4 npt(f)



169970

Quick-Connect Nipple

Allows quick attachment of air supply hoses to pump motor

169970	1/4 npt(m)
169967	1/4 npt(f)
169971	3/8 npt(m)
110196	1/2 npt(m)
110197	3/4 npt(m)



205090

Air Needle Valve

Controls pump speed by restricting air flow to pump or other air-operated equipment

205090	1/4 npt(f) outlet port; 1/4 npt(m) inlet port
206264	1/8 npt(f) outlet port; 1/4 npt(m) inlet port

Air Pressure Relief Valve

Prevents pump from operating beyond recommended working pressure by opening at a pre-set maximum air pressure

103347	90 psi (6 bar)
110065	60 psi (4 bar)



110065

Accessories

Hoses and Fittings

Air Pressure Gauge

Allows visual check of air pressure being supplied to the pump. Rated to 200 psi (14 bar)

110319	1/8 npt(m) bottom inlet; black
100960	1/4 npt(m) bottom inlet; black
101180	1/4 npt(m) bottom inlet; chrome

Air manifold

Supply several pumps from one supply line. Larger port delivery ensures adequate air flow to all pumps

158990	Four outlet ports; 3/8 npt(f)
601950	Three outlet ports; 1/2 npt(f)

Runaway Valve

Prevents pump damage by automatically closing the air line to stop the pump when a runaway pump condition occurs due to an empty barrel or hose leak

224040	3/4 npt(fbe)
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Blow Guns

208627	Air Blow Gun, 1/4 npt(f), use with coupler 208536
236211	Safety Blow Gun tip swivels freely and cannot be removed. Tip pressure will not exceed 30 psi (2 bar), adequate for cleaning. Maximum working pressure 150 psi (10 bar). Use with coupler 208536

Tire Inflators

236205	Heavy-duty Tire Inflator includes 12 in (30 cm) hose with swivel dual-foot chuck and pop-out gauge. Tapered chuck nut fits wheel-cover holes on cars and light trucks. Gauge ranges from 0-120 psi in 2 psi increments. Maximum working pressure 250 psi (18 bar), 1/4 npt(f) inlet
236206	Passenger Car Tire Inflator includes 12 in (30 cm) hose with straight-on chuck and pop-out gauge. Tapered chuck nut fits wheel cover holes on cars and light trucks. Ideal for use on reels. Gauge ranges from 0-90 psi in 2 psi increments. Maximum working pressure 250 psi (18 bar), 1/4 npt(f) inlet
218545	1/4 npt(f) Tire Chuck, durable, full-volume tool for adding/relieving air pressure

Water Valve

180685	Water/Anti-Freeze Bib is a durable, full-volume dispense nozzle for water, anti-freeze and windshield washer fluid. Nitrile rubber seals with 1/4 npt(f) inlet. Maximum pressure is 100 psi (7 bar).
180685	Water/Anti-Freeze Bib is a durable, full-volume dispense nozzle for water, anti-freeze and windshield washer fluid. Nitrile rubber seals with 1/4 npt (f) inlet. Maximum pressure is 100 psi (7 bar)

Heavy-Duty Reinforced Hoses

Heavy-duty reinforced hose for use with grease, oil and undercoating material. Hoses are black, male at both ends. Lubrication hoses listed are grounded for static electrical discharge.

1/4 in ID hoses with maximum pressure rating of 5000 psi (345 bar)

Part No.	Length	Fittings
109145	12 in (0.3 m)	1/8 in x 1/8 in (4.8 mm x 4.8 mm) with bend restrictor
109146	15 in (0.4 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
109147	24 in (0.6 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
109148	30 in (0.8 m)	1/8 in x 1/8 in (4.8 mm x 4.8 mm) with bend restrictor
109149	48 in (1.2 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109150	72 in (1.8 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109151	12 ft (3.6 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109152	15 ft (4.6 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109153	20 ft (6.1 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)
109154	25 ft (7.6 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109156	35 ft (10.6 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)
109157	40 ft (12.2 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)
109158	50 ft (15.3 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)



Lubrication Hoses

Hoses and Fittings

3/8 in ID hoses with maximum pressure rating of 4000 psi (276 bar)

Part No.	Length	Fittings
109160	12 in (0.3 m)	1/4 in x 1/2 in (6.4 mm x 12.7 mm)
109161	24 in (.62 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
109162	48 in (1.2 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
109163	72 in (1.8 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
109165	15 ft (4.6 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109170	50 ft (15.3 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)
109169	40 ft (12.2 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)
109170	50 ft (15.3 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)

Lubrication Hoses (Oil)

1/2 in ID hoses with maximum pressure rating of 3000 psi (207 bar)

Part No.	Length	Fittings
110069	15 in (0.4 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
220598	18 in (0.5 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
220600	54 in (1.4 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
220591	72 in (1.8 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
220590	10 ft (3.1 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
220592	16 ft (4.9 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
220593	20 ft (6.1 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
220608	25 ft (7.6 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
221092	40 ft (12.2 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
221093	50 ft (15.3 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
237861	75 ft (22.9 m)	1/2 in x 3/4 in (12.7 mm x 19.1 mm)
109108	18 in (0.4 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)
109105	72 in (1.8 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)
111010	10 ft (3.0 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)
237865	75 ft (22.9 m)	1/2 in x 1 in (12.7 mm x 25.4 mm)
237866	50 ft (15.2 m)	1/2 in x 1 in (12.7 mm x 25.4 mm)

1 in ID hose rated to maximum pressure of 125 psi (8.7 bar)

Part No.	Length	Fittings
249058	50 ft (15.2)	1 in x 1 in (25.4 mm x 25.4 mm)

1 in ID hose rated to maximum pressure of 212 psi (14.6 bar)

Part No.	Length	Fittings
241908	50 ft (15.2)	1 in x 1 in (25.4 mm x 25.4 mm)
241907	30 ft (9.1 m)	1 in x 1 in (25.4 mm x 25.4 mm)

Air/Water Hoses

Hoses for air, water, anti-freeze and windshield washer fluid. Hoses are red with male fittings at both ends.

Coiled 1/4 in ID hose with maximum pressure rating of 180 psi (12 bar)

Part No.	Length	Fittings
205600	50 ft (15.3 m)	1/4 in x 50 ft (6.4 mm x 15.3 m)

Air/Water Hoses

Hoses and Fittings

Fabric-Reinforced 1/4 in ID hoses with maximum pressure rating of 180 psi (12 bar)

Part No.	Length	Fittings
109123	18 in (0.5 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109124	4 ft (1.2 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109125	6 ft (1.8 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109126	10 ft (3.1 m)	1/4 in x 1/4 in (6.4 mm x 6.4 mm)
109127	25 ft (7.6 m)	1/4 in x 1/2 in (6.4 mm x 12.7 mm)
109128	40 ft (12.2 m)	1/4 in x 1/2 in (6.4 mm x 12.7 mm)
218491	40 ft (12.2 m)	3/8 in x 1/4 in (9.5 mm x 6.4 mm)

3/8 in ID hoses with maximum pressure rating of 180 psi (12 bar)

Part No.	Length	Fittings
204560	18 in (0.5 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
109130	4 ft (1.2 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
203320	6 ft (1.8 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
109131	10 ft (3.1 m)	3/8 in x 3/8 in (9.5 mm x 9.5 mm)
110326	16 ft (4.9 m)	1/4 in x 3/8 in (6.4 mm x 9.5 mm)
109132	25 ft (7.6 m)	3/8 in x 1/2 in (9.5 mm x 12.7 mm)
109133	30 ft (9.2 m)	3/8 in x 1/2 in (9.5 mm x 12.7 mm)
109134	40 ft (12.2 m)	3/8 in x 1/2 in (9.5 mm x 12.7 mm)
109135	60 ft (18.3 m)	3/8 in x 1/2 in (9.5 mm x 12.7 mm)

1/2 in ID hose with maximum pressure rating of 180 psi (12 bar)

Part No.	Length	Fittings
218093	22 in (0.56 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
110046	4 ft (1.2 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
205418	6 ft (1.8 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
214656	10 ft (3.1 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
248312	25 ft (7.6 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)
248313	50 ft (15.2 m)	1/2 in x 1/2 in (12.7 mm x 12.7 mm)

3/4 in ID hoses with maximum pressure rating of 180 psi (12 bar)

Part No.	Length	Fittings
110047	18 in (0.5 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)
110048	4 ft (1.2 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)
208610	6 ft (1.8 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)
214955	10 ft (3.1 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)
208611	25 ft (7.6 m)	3/4 in x 3/4 in (19.1 mm x 19.1 mm)



Pipe Fittings and Swivels

Hoses and Fittings

Bushing – reducing, standard and expanding

Part No.	Thread Size (m x f)	Part No.	Thread Size (m x f)	Part No.	Thread Size (m x f)
100030	1/4 in x 1/8 in	159841	3/8 in x 1/4 in	100206	1/2 in x 1/4 in
100081	1/2 in x 3/4 in	100615	3/4 in x 1/4 in	100505	3/4 in x 3/8 in
100896	3/4 in x 1/2 in	100380	1 in x 1/2 in	158586	1 in x 3/4 in

Pipe Adapters

Part No.	Thread Size (m x f)	Part No.	Thread Size (m x f)	Part No.	Thread Size (m x f)
150171	1/8 in x 1/8 in	159840	1/8 in x 1/4 in	156580	1/8 in x 3/8 in
150287	1/4 in x 3/8 in	159842	1/4 in x 1/2 in	150286	3/8 in x 3/8 in
156022	3/8 in x 1/2 in	168595	1/2 in x 3/4 in		

Street Elbows

Part No.	Thread Size (m x f)	Part No.	Thread Size (m x f)	Part No.	Thread Size (m x f)
100840	1/4 in x 1/4 in	155699	3/8 in x 3/8 in	158683	1/2 in x 1/2 in
176393	3/4 in x 3/4 in				

Coupling (standard)

Part No.	Thread Size	Part No.	Thread Size	Part No.	Thread Size
100451	1/8 in	113093	1/4 in	162024	3/8 in
158581	1/2 in	100385	3/4 in	100474	1 in

Hex Nipple (standard and reducing)

Part No.	Thread Size	Part No.	Thread Size	Part No.	Thread Size
151519	1/4 in x 1/8 in	156971	1/4 in x 1/4 in	156296	3/8 in x 1/8 in
165198	3/8 in x 1/4 in	156849	3/8 in x 3/8 in	162449	1/2 in x 1/4 in
159239	1/2 in x 3/8 in	158491	1/2 in x 1/2 in	194048	3/4 in x 3/8 in
157191	3/4 in x 1/2 in	175013	3/4 in x 3/4 in	158555	1 in x 3/4 in

Square-Head Plug

Part No.	Thread Size	Part No.	Thread Size	Part No.	Thread Size
111697	1/4 in	100040	3/8 in	100737	1/2 in
104663	3/4 in				

Straight Swivel Adapter*

Part No.	Rigid (m) x Swivel (f)	Part No.	Rigid (m) x Swivel (f)	Part No.	Rigid (m) x Swivel (f)
208434	1/8 in x 1/4 in	156823	1/4 in x 1/4 in	157705	1/4 in x 3/8 in
155665	3/8 in x 3/8 in	162505	3/8 in x 1/2 in	156684	1/2 in x 1/2 in
158256	1/2 in x 3/8 in	157785	3/4 in x 3/4 in	202965	1 in x 3/4 in
160022	1 in x 1 in				

90° Swivel Adapter*

Part No.	Rigid (f) x Swivel (f)	Part No.	Rigid (f) x Swivel (f)	Part No.	Rigid (f) x Swivel (f)
157676	1/4 in x 1/4 in	155677	3/8 in x 3/8 in	159801	3/8 in x 1/2 in
157416	1/2 in x 1/2 in	156589	3/4 in x 3/4 in		

Straight Swivel Adapter*

Part No.	Rigid (f) x Swivel (f)	Part No.	Rigid (f) x Swivel (f)	Part No.	Rigid (f) x Swivel (f)
155570	1/4 in x 1/4 in	159153	3/8 in x 1/4 in	156173	3/8 in x 3/8 in
155653	1/2 in x 1/4 in	161077	1/2 in x 3/8 in	155865	1/2 in x 1/2 in
156172	3/5 in x 3/4 in	158383	1 in x 1 in		

90° Swivel*

Part No.	Rigid (M) x Swivel (F)	Part No.	Rigid (M) x Swivel (F)	Part No.	Rigid (M) x Swivel (F)
155541	1/4 in x 1/4 in	155495	3/8 in x 1/4 in	155494	3/8 in x 3/8 in
217430	3/8 in x 1/2 in	161037	1/2 in x 3/8 in	155470	1/2 in x 1/2 in
160327	3/4 in x 3/4 in				

45° Swivel Adapter*

Part No.	Rigid (M) x Swivel (F)	Part No.	Rigid (M) x Swivel (F)	Part No.	Rigid (M) x Swivel (F)
161889	3/8 in x 3/8 in	105281	3/4 in x 3/4 in		

*Not a "live" swivel, position is stationary after tightened



Tube and Fittings

Hoses and Fittings

Tube Fittings

Maximum pressure rating of 3000 psi (207 bar) with appropriate tubing wall thickness

Tube Union Flow 90° Elbow

Part No.	Tube OD	
101012	5/8 in	-
101376	7/8 in	-

Tube Union – Straight

Part No.	Tube OD	
101009	5/8 in	-
101340	7/8 in	-

Male Connector

Part No.	Tube OD	Thread
101339	7/8 in	3/4 npt

Female Connector – Straight

Part No.	Tube OD	Thread
101008	5/8 in	1/2 npt

Tube Tee with Female Branch

Part No.	Tube OD	Thread
101013	5/8 in	5/8 npt

NOTE: Consult you local distributor for additional tube-fitting requirements (ie: high-pressure, low-pressure, etc.) and fitting recommendations: Parker; AeroQuip; Weatherhead; Lenz; Crawford; or Imperial Eastmand.



Technical Information

Always use a qualified installer and ensure the installer follows the detailed instructions included with every Graco product.

1. Always use new pipe. Make certain that pipes are clean and free of rust and scale.
2. When cutting pipe remove burrs and chips that may damage dispense valves and meters.
3. Always flush the system with oil before attaching dispense valves and meters.

Air Lines

Main Line	Branch Line	Pump Model
3/4 in or 1 in ID pipe	3/8 in or 1/2 in ID pipe	Fast-Ball; Mini Fire-Ball 225
3/4 in or 1 in ID pipe	1/2 in ID pipe	Fire-Ball

Fluid Lines

This information applies to typical automotive flow rate service requirements

Chassis Grease Lubricant Supply Lines (based upon 5000 psi (345 bar) maximum working pressure)

Supply Line Length	Supply Pump	Hydraulic Supply Line Tubing
Up to 50 feet	50:1 Fire-Ball 300, 425	5/8" OD x .109" Wall Tube
50 to 100 feet	50:1 Fire-Ball 300, 425	5/8" OD x .109" Wall Tube
100 to 200 feet	50:1 Fire-Ball 300	N/A
100 to 200 feet	50:1 Fire-Ball 425	N/A
200 feet and up	50:1 Fire-Ball 300, 425	N/A

Motor Oil, Gear Lube, or ATF Lubricant Supply Lines (based upon 1000 psi maximum working pressure)

Supply Line Length	Supply Pump	Hydraulic Supply Line Tubing
Up to 50 feet	5:1 Fire-Ball 300	5/8" OD x .049" Wall Tube
Up to 50 feet	10:1 Fire-Ball 425	3/4" OD x .049" Wall Tube
50 to 100 feet	5:1 Fire-Ball 300	3/4" OD x .049" Wall Tube
50 to 100 feet	10:1 Fire-Ball 425	1" OD x .049" Wall Tube
100 to 200 feet	5:1 Fire-Ball 300	1" OD x .049" Wall Tube
100 to 200 feet	10:1 Fire-Ball 425	1-1/2" OD x .095" Wall Tube
200 feet and up	5:1 Fire-Ball 300	1-1/2" OD x .095" Wall Tube
200 feet and up	10:1 Fire-Ball 425	1-1/2" OD x .095" Wall Tube

Petroleum Management Group

Ordering and Warranty Information

This Price List supersedes all previous price lists dated prior to January 2, 2011.

Prices, discount codes, and family codes subject to change without notice.

\$50.00 U.S. net minimum billing, exclusive of application taxes and transportation.

The goods are sold to Distributor EX Works (Incoterms 2000) Graco's premises or the premises of Graco's Supplier. All freight charges, handling, insurance, duty, taxes and other charges are at Distributor's expense, with the following exception: for single orders and/or shipments to USD \$2,500 net value or more, Graco will prepay surface freight charges to the U.S. port of exit or the U.S. freight forwarder of Distributor's choice.

All prices are F.O.B. shipping point.

Returns will not be accepted on configured or low demand products built to special customer order. These orders are subject to a cancellation fee.

Graco strives to ship all orders within 48 hours. If you have need for an emergency shipment and your order is received before 2:30 p.m. Central Time, you may request same day shipment.

Graco Inc. reserves the right to correct any typographical errors in this price list.

Possession of this list does not permit any party to purchase any or all of the items listed herein.

Prices, as shown herein, do not include any sales tax, excise tax, or other similar tax which must be added when, as, and if applicable.

This price list does not list parts that are obsolete or discontinued. Always refer to the most recent lists and instruction forms.

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Petroleum Management Group

Ordering and Warranty Information

Standard Graco Warranty

1 Year Warranty Policy

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective.

This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations. This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment

does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

Graco Petroleum Management Group Equipment Extended Warranty

Graco warrants all equipment referenced in this document that is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. Graco will, for a period as defined in the table below from the date of sale, repair or replace equipment covered by this warranty and determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

	5 Year Warranty	7 Year Warranty	10 Year Warranty
Oil/Grease Pumps and Packages	LD Pumps	Mini-Fireball 225	Fireball 425
	Fastball / Fast-Flo	Fireball 300	NXT Pumps
	AODD		
Electronic Meters and Valves LD Meter Electronics (2 years) All other meter series electronics (3 years)	LD Meters	Matrix Meters	
		SD Electronic Meters	
		EM6/EM12 Electronic Meters	
		IM5/IM6 Electronic Meters	
		SDI15 Electronic Meters	
		SDV15 Valve	
		XDV20 Valve	
Hose Reels and Packages All reel series wear parts, including but not limited to: hose, swivel seats, roller guides (12 months). All bare hose reels, all components (12 months).	LD Series Reels and Packages	SD Series Reels & Packages	
		XD Series Reels & Packages	
		700 Series Reels	
Accessories	Oil King		
	Coolant King		
	Oil Ace		

Equipment or components not identified are not covered by this warranty. Complete part number list available by request.

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